

Spring 3-2011

Proposed Greenway of Hatfield, Massachusetts - LA497C - Senior Studio

Michael A. Brescia

University of Massachusetts - Amherst, mbrescia@student.umass.edu

Rachel L. Grigorian

University of Massachusetts - Amherst, rgrigori@student.umass.edu

Zachary M. Kingston

University of Massachusetts - Amherst, zkingsto@student.umass.edu


Carl M. McCrae

University of Massachusetts - Amherst, cmccrae@student.umass.edu

James A. Rebello

University of Massachusetts - Amherst, jarebell@student.umass.edu

Follow this and additional works at: https://scholarworks.umass.edu/larp_grad_research

 Part of the [Agricultural and Resource Economics Commons](#), [Demography, Population, and Ecology Commons](#), [Environmental Design Commons](#), [Geographic Information Sciences Commons](#), [Growth and Development Commons](#), [Historic Preservation and Conservation Commons](#), [History Commons](#), [Landscape Architecture Commons](#), [Urban, Community and Regional Planning Commons](#), and the [Urban Studies and Planning Commons](#)

Brescia, Michael A.; Grigorian, Rachel L.; Kingston, Zachary M.; McCrae, Carl M.; and Rebello, James A., "Proposed Greenway of Hatfield, Massachusetts - LA497C - Senior Studio" (2011). *Landscape Architecture & Regional Planning Studio and Student Research and Creative Activity*. 13.

Retrieved from https://scholarworks.umass.edu/larp_grad_research/13

This Article is brought to you for free and open access by the Landscape Architecture & Regional Planning at ScholarWorks@UMass Amherst. It has been accepted for inclusion in Landscape Architecture & Regional Planning Studio and Student Research and Creative Activity by an authorized administrator of ScholarWorks@UMass Amherst. For more information, please contact scholarworks@library.umass.edu.

Hatfield Regional Greenway Report



University of Massachusetts
Department of Landscape Architecture and Regional Planning
LA 497C Spring 2011

Rachel Grigorian, Zak Kingston, James Rebello, Michael Brescia, Carl McCrae

Table of Contents:

- Introduction..... 2
- Regional Context, Land Use, Transportation and Economic Development..... 3
- Natural Resources and Features..... 11
- Mill River and Connecticut River Corridor..... 19
- Open Space and Recreation Assessment..... 23
- Hatfield Greenway Proposal
 - Introduction..... 32
 - Greenway Master Plan..... 32
 - Proposed Protected Land..... 34
 - Town Center Focus Plan..... 35
 - Individual Focus Areas..... 36
- Conclusion..... 61
- Sources/Bibliography..... 62

Introduction:

The purpose of this report is to show the results of a partnership between the Town of Hatfield Massachusetts, and the Department of Landscape Architecture and Regional Planning at the University of Massachusetts.

The Town of Hatfield initially approached the University for assistance in understanding the options available for Greenway development in Hatfield, while maintaining the charm and character the town is proud of.

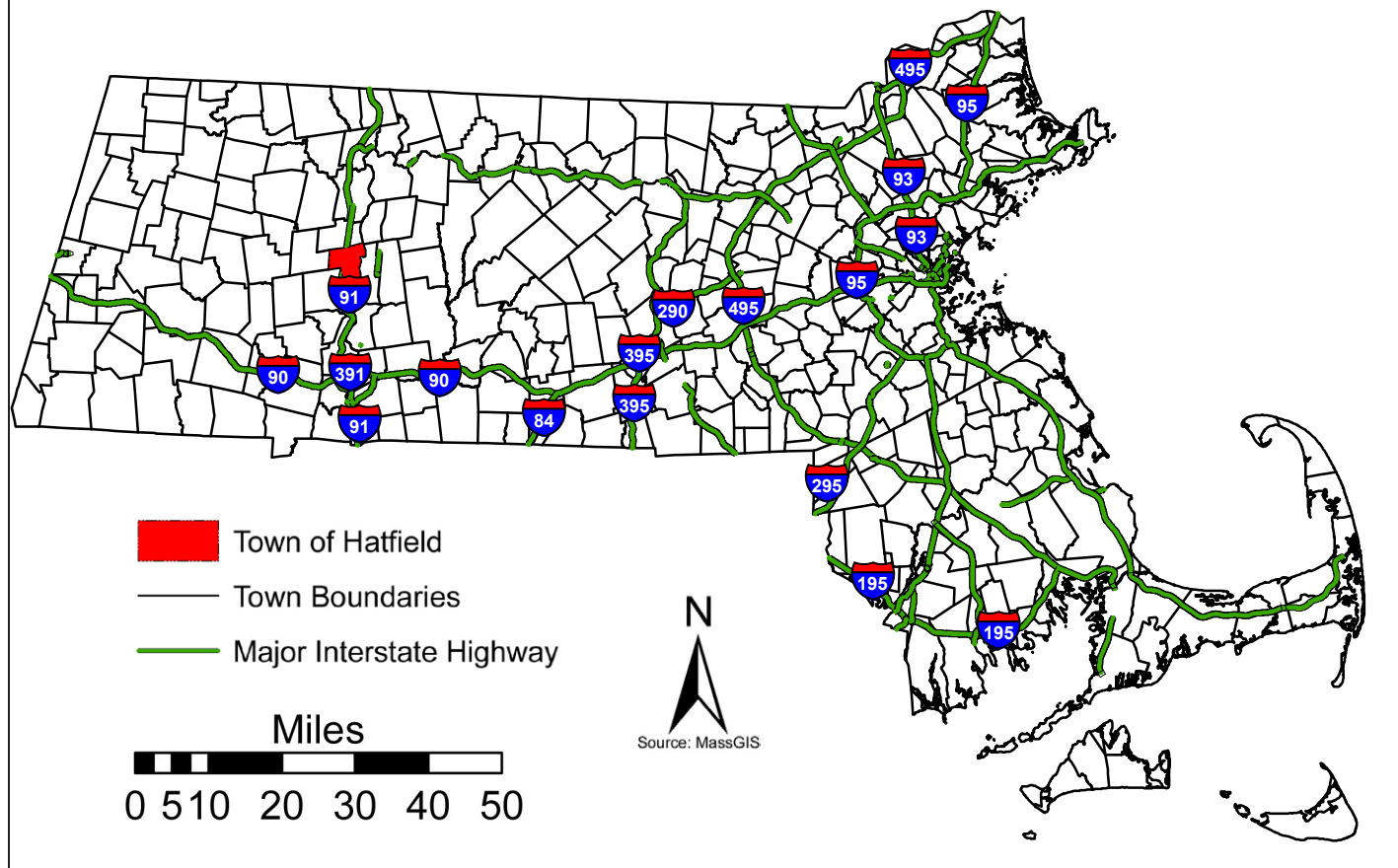
In his ground-breaking book, *Greenways for America*, Author Charles Little (1990) provides a simple definition of a Greenway:

"A greenway is a linear open space established along either a natural corridor, such as a riverfront, stream valley, or ridgeline, or overland along a railroad right-of-way converted to recreational use, a canal, scenic road, or other route. It is any natural or landscaped course for pedestrian or bicycle passage. An open-space connector linking parks, nature reserves, cultural features, or historic sites with each other and with populated areas."

This report will provide an assessment and analysis of the current conditions of the Town of Hatfield and recommendations for a Greenway Plan that will enhance the quality of life for the residents.

Regional Context, Land Use, Transportation and Economic Development:

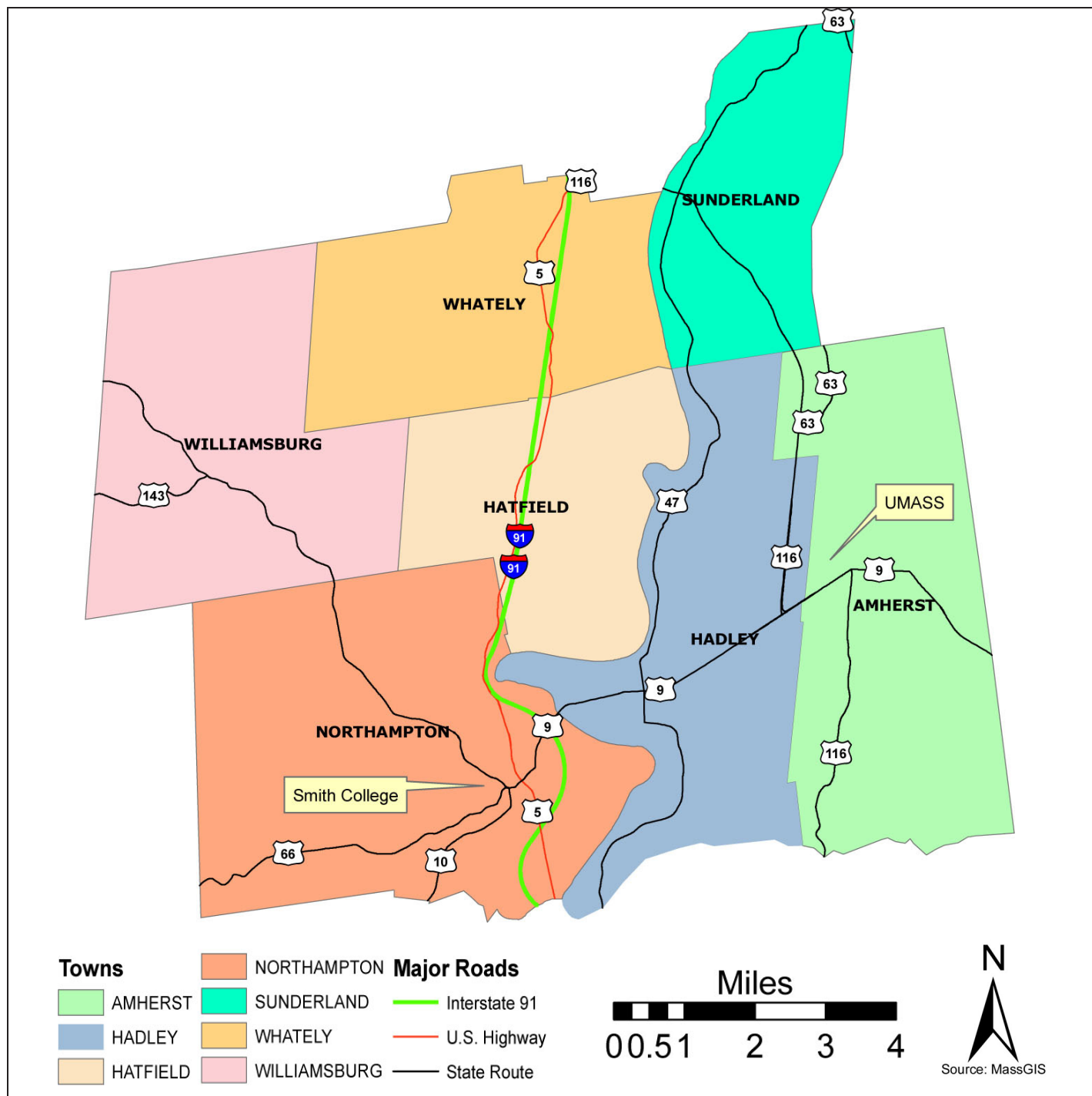
State of Massachusetts Context:



The Town of Hatfield is located in Hampshire County in Western Massachusetts. Hatfield sits along the Interstate 91 corridor, 25 miles North of the City of Springfield. Boston, the State capital, is 110 miles to the East.

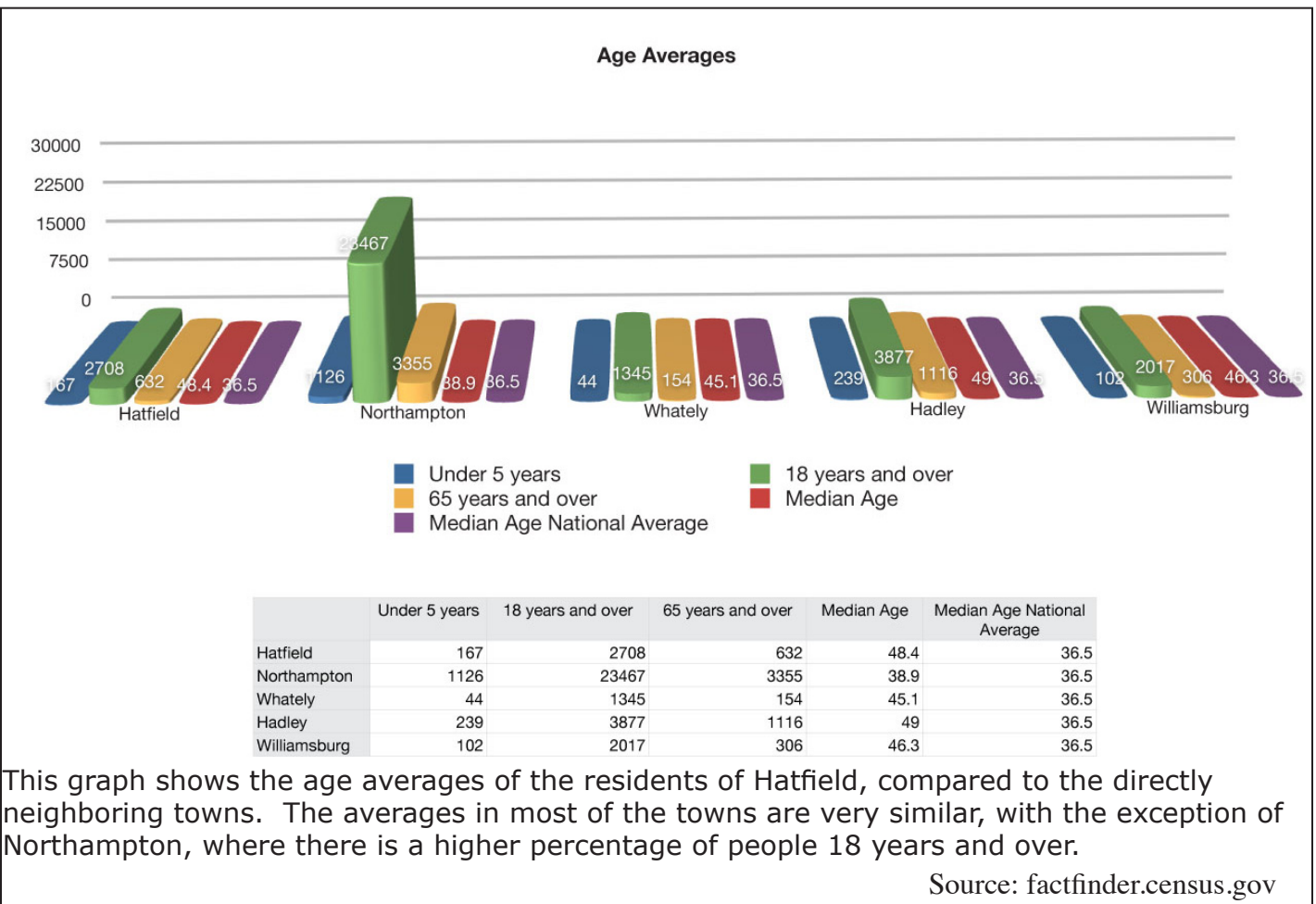
Hatfield is equidistant between the neighboring states of Vermont to the North, and Connecticut to the South. The State of New York is 32 miles to the West.

Neighboring Towns Context:

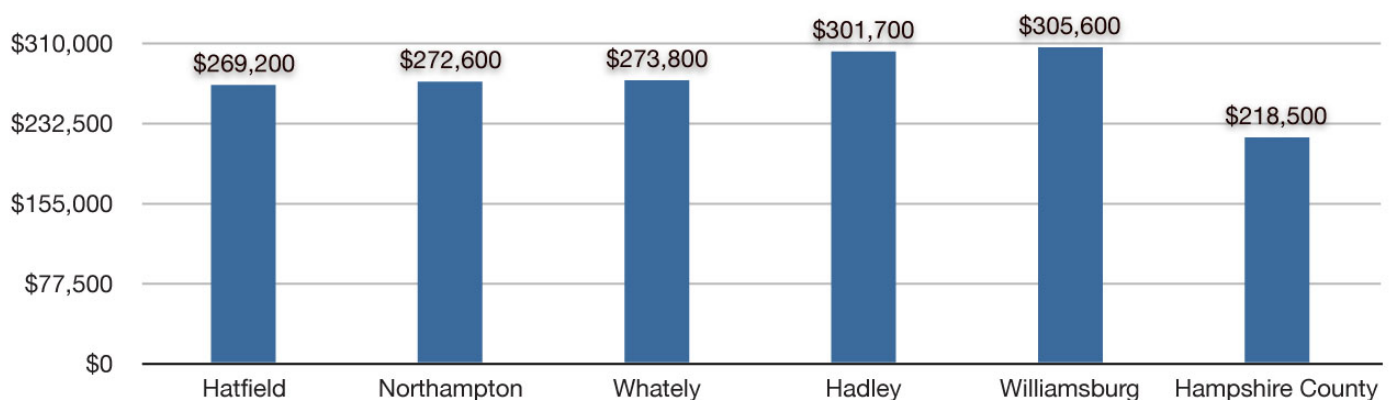


The Town of Hatfield covers approximately 16 square miles. The town is bordered by Whately to the North, Williamsburg to the West, Northampton to the South, and Hadley to the East. The border with Hadley is defined by the Connecticut River. The town of Sunderland is directly northeast of Hatfield.

Demographics:



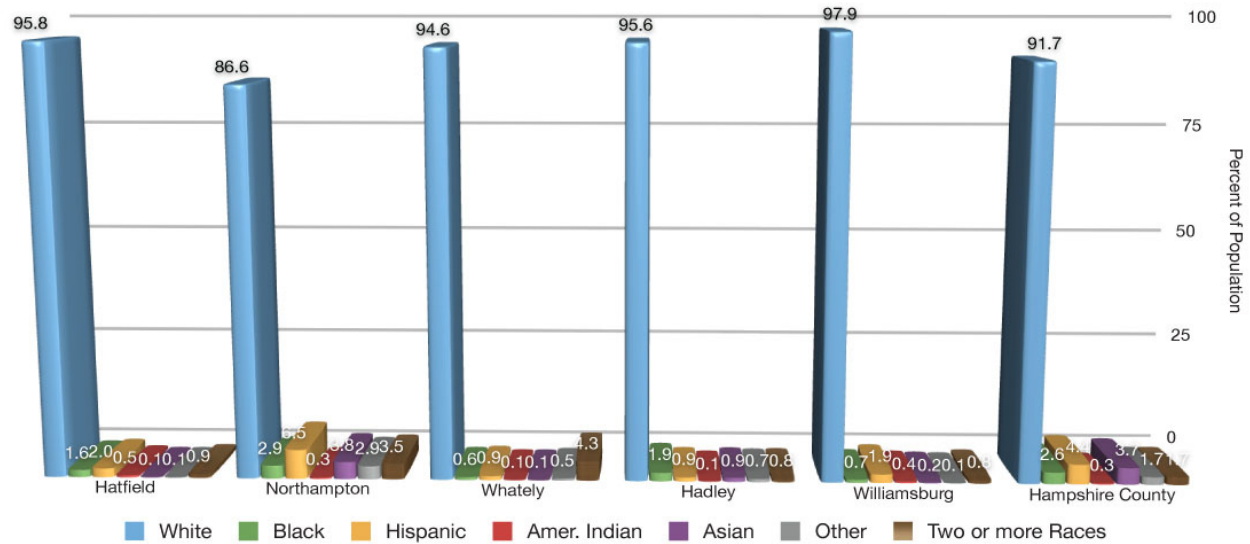
Median Home Prices



The median home price in Hatfield is \$269,200, slightly under the home prices in neighboring towns. When compared to Hampshire County, however, Hatfield's home prices are approximately \$50,000 higher.

Source: factfinder.census.gov

Town Diversity

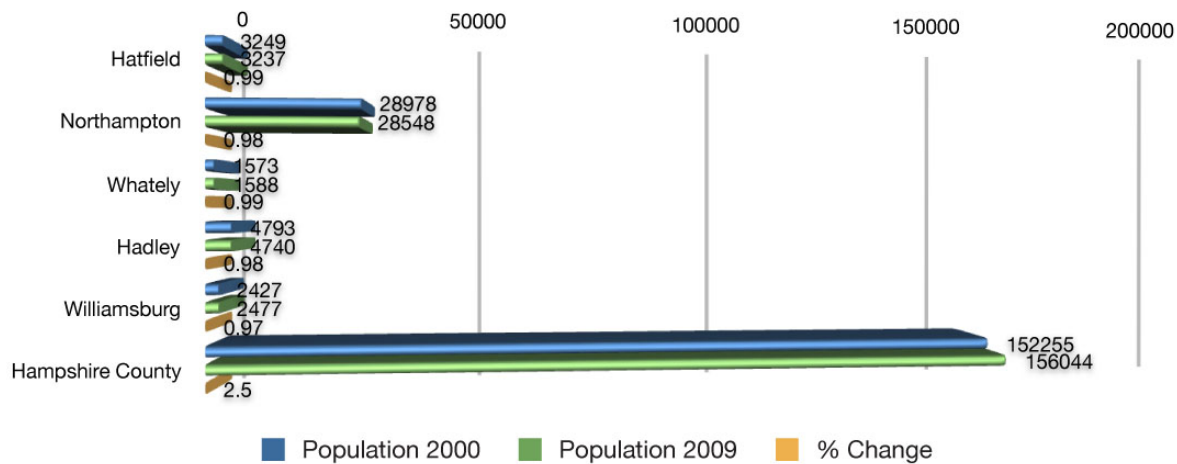


	Hatfield	Northampton	Whately	Hadley	Williamsburg	Hampshire County
White	95.8	86.6	94.6	95.6	97.9	91.7
Black	1.6	2.9	0.6	1.9	0.7	2.6
Hispanic	0	0.3	0.9	0.9	1.9	4.4
Amer. Indian	0.5	0.3	0.1	0.1	0.4	0.3
Asian	0.1	3.8	0.1	0.9	0.2	3.7
Other	0.1	2.9	0.5	0.7	0.1	1.7
Two or more Races	0.9	3.5	4.3	0.8	0.8	1.7

The lack of diversity in Hatfield, neighboring towns, and Hampshire County is shown in this graph. Northampton is often thought to be much more diverse than it actually is.

Source: factfinder.census.gov

Population Change

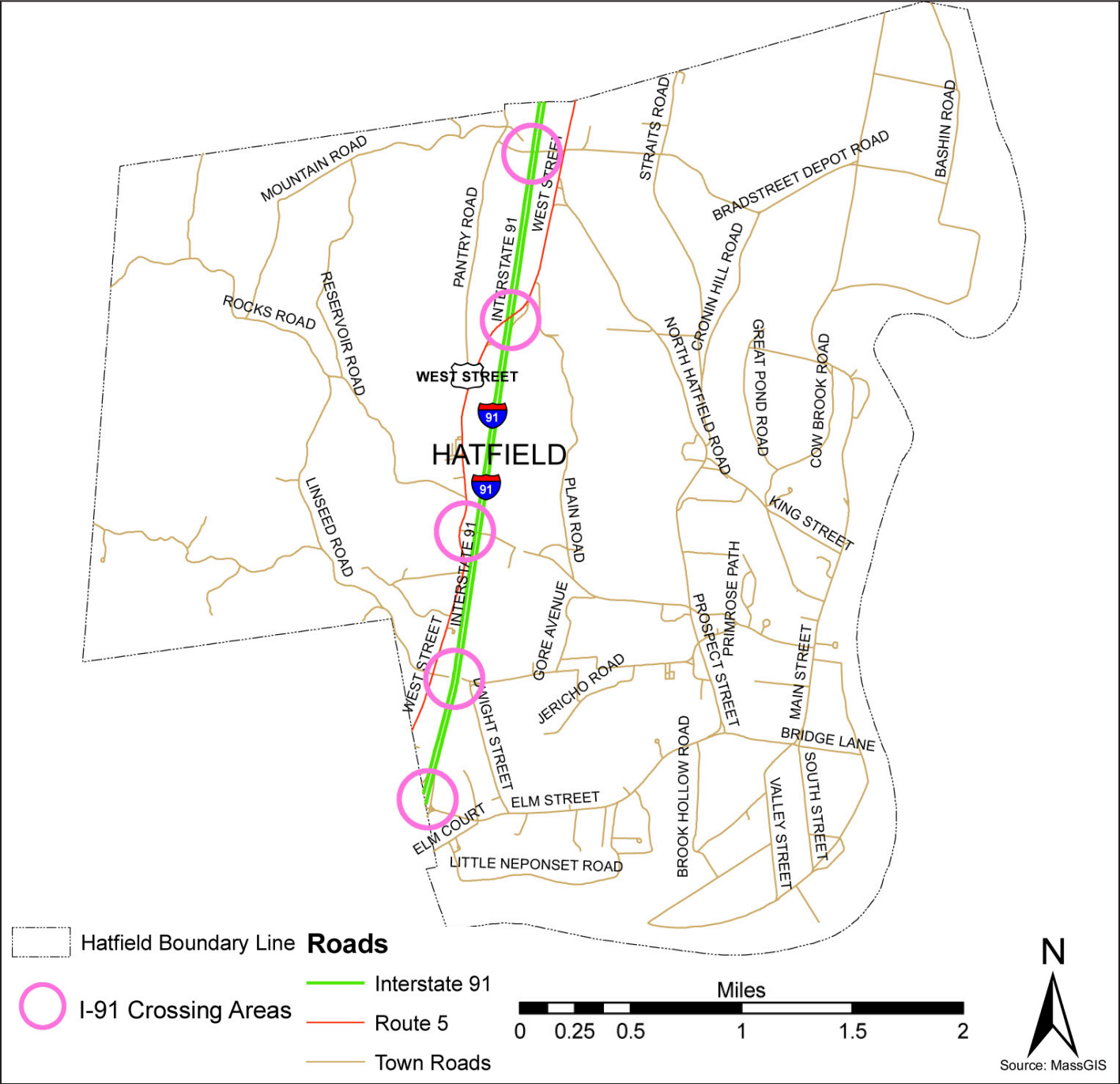


	Population 2000	Population 2009	% Change
Hatfield	3249	3237	0.99
Northampton	28978	28548	0.98
Whately	1573	1588	0.99
Hadley	4793	4740	0.98
Williamsburg	2427	2477	0.97
Hampshire County	152255	156044	2.5

Town populations in the years 2000 and 2009 are shown, along with the percent change in that time. Hatfield and the neighboring towns all experienced less than 1% change, while Hampshire County as a whole showed a 2.5% change.

Source: factfinder.census.gov

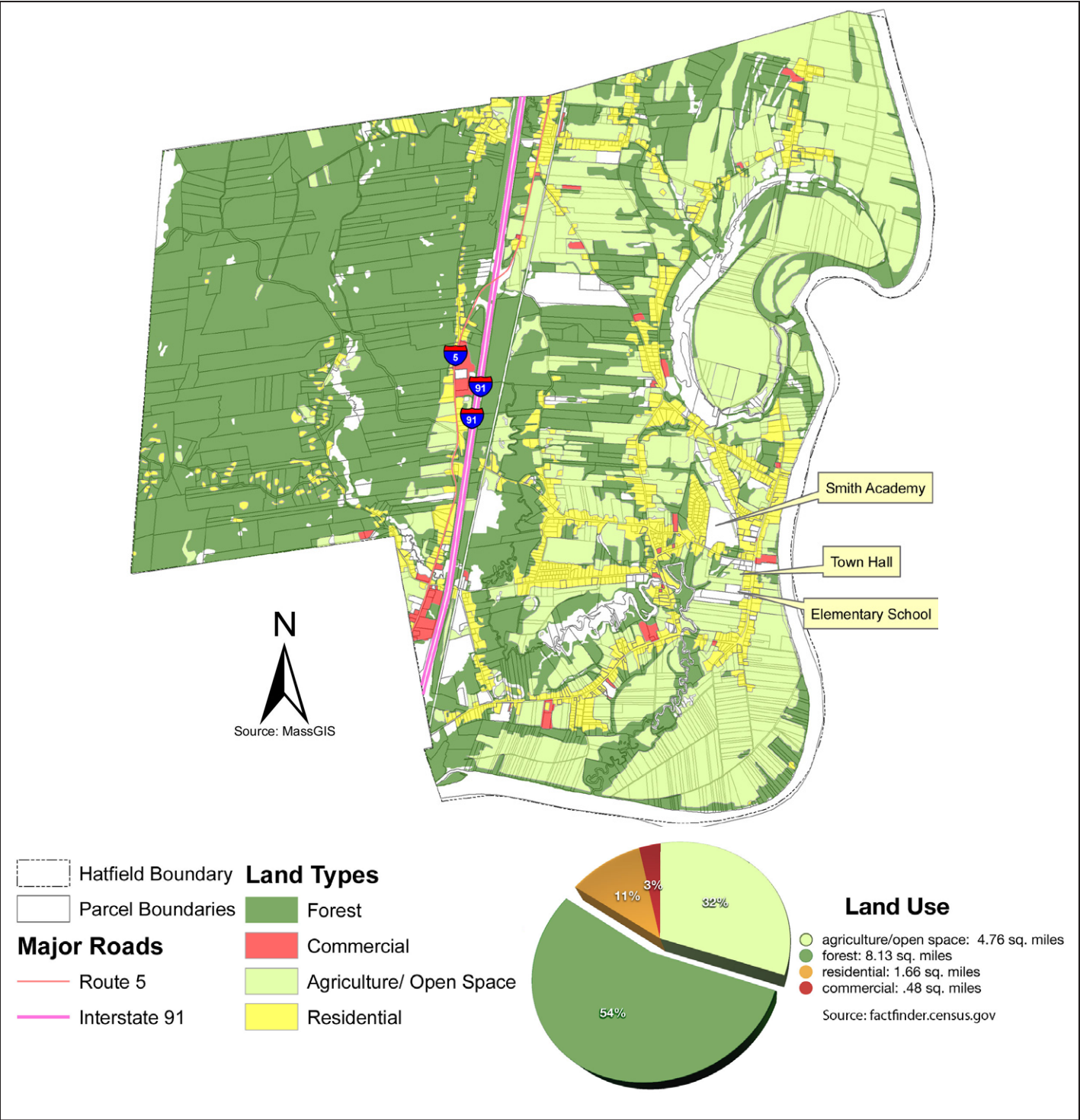
Hatfield Transportation Network:



The Town of Hatfield is divided North/South by Interstate 91 and Routes 5 & 10. These roads seperate the mountainous Western side of town, from the flat, agriculture-based Eastern side. There are several I-91 crossing areas, indicated on the above map.

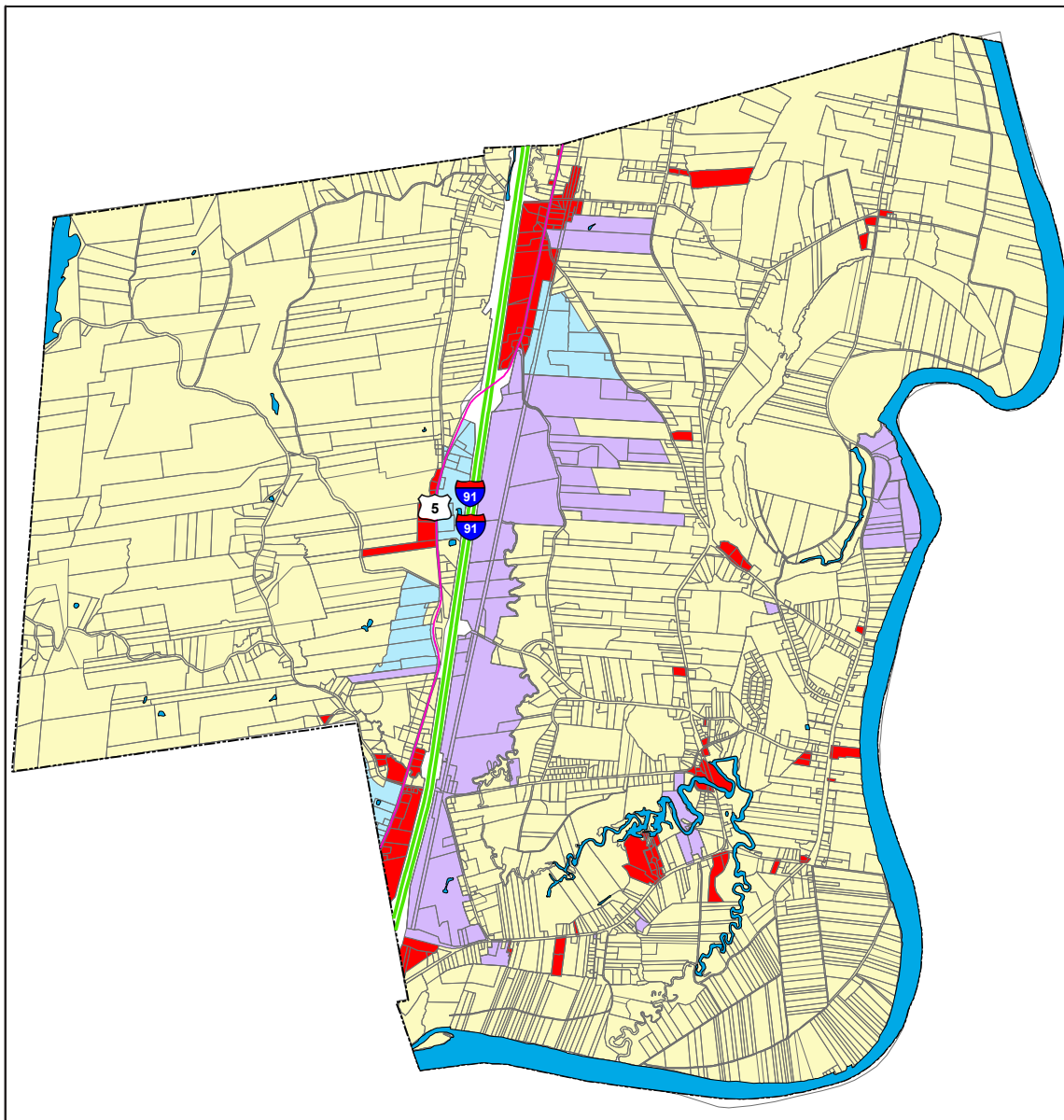
Hatfield also has a network of town roads, ranging from paved to dirt, some of which are not maintain during the winter months.

Land Types:

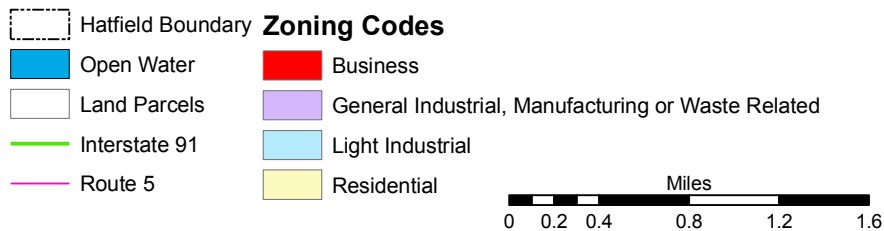


The Town of Hatfield is dominated by two land types: forest and agriculture. There are 8.13 square miles of forest land, and 4.76 square miles of agriculture and open space.

Zoning:



Zoning



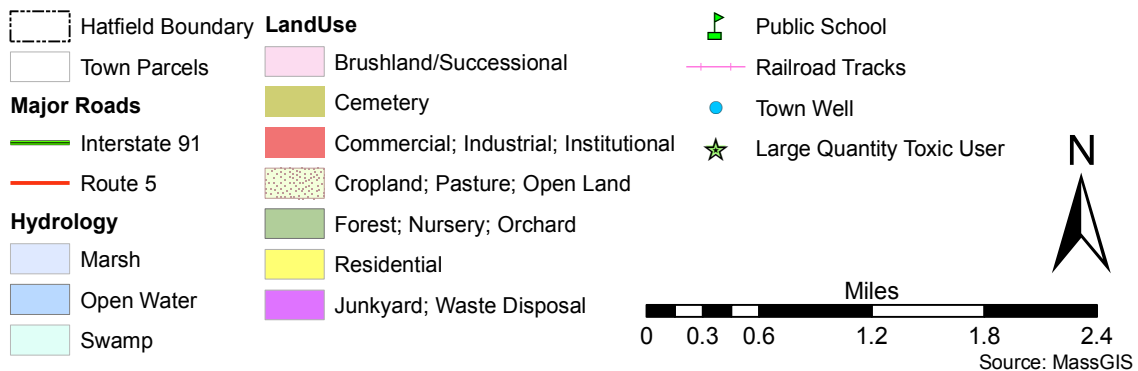
Hatfield is predominantly zoned for Residential, with a corridor of Business, Industrial, and Light Industrial following I-91 and Routes 5 & 10. Unfortunately much of this Industrial Zone falls along the sensitive Mill River.

There are pockets of Business Zones in the downtown areas, and a curious Industrial Zone on the Connecticut River.

Land Use and Cover:



Hatfield Land Use and Cover



This Land Use and Cover map clearly shows the different land types on the East and West sides of Hatfield, and the divide caused by Interstate 91.

The red indicates commercial land uses and are shown to be creeping North from neighboring Northampton, which is a concern to many Hatfield residents.

Natural Resources and Features:

The Town of Hatfield has a diverse set natural landscapes with their own unique character which have more or less formed natural boundaries for residential, industrial and agricultural development. Accordingly, Hatfield hosts two different main topographic relief forms: the fertile lowlands in the eastern two thirds of the Town; and the rugged woody areas, located just west of Interstate 91.

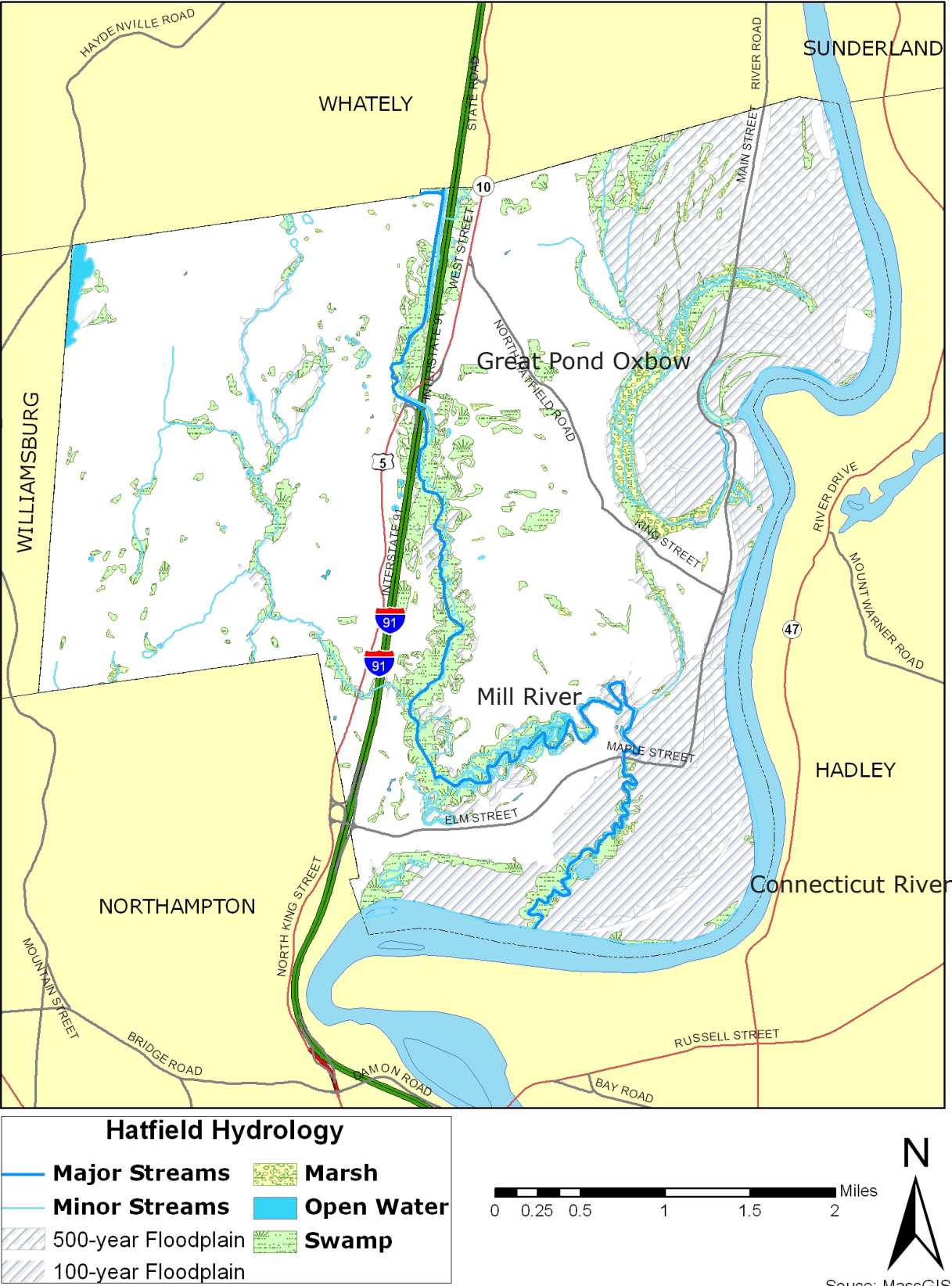
In the lowlands to the east, the Connecticut River has carved a path in the bottom of a former glacial lake bottom, and its natural flooding cycles in the wet months of spring leave silt deposits that have contributed to rich farmland in the lowlands that border its banks.

East of the Interstate, which acts as a boundary between the western and eastern parts of town, the terrain has hardly any slope with elevations being as low as 110 feet above sea level. Located within the heart of Hatfield's farmland lies a remnant of the meandering Connecticut River: the Great Pond and Cow Bridge Brook. The Great Pond, a Connecticut River oxbow, is approximately 200 acres of open water, wooded swamp, and marsh, and contains many rare plant species and is an important refuge for migrating wildfowl.

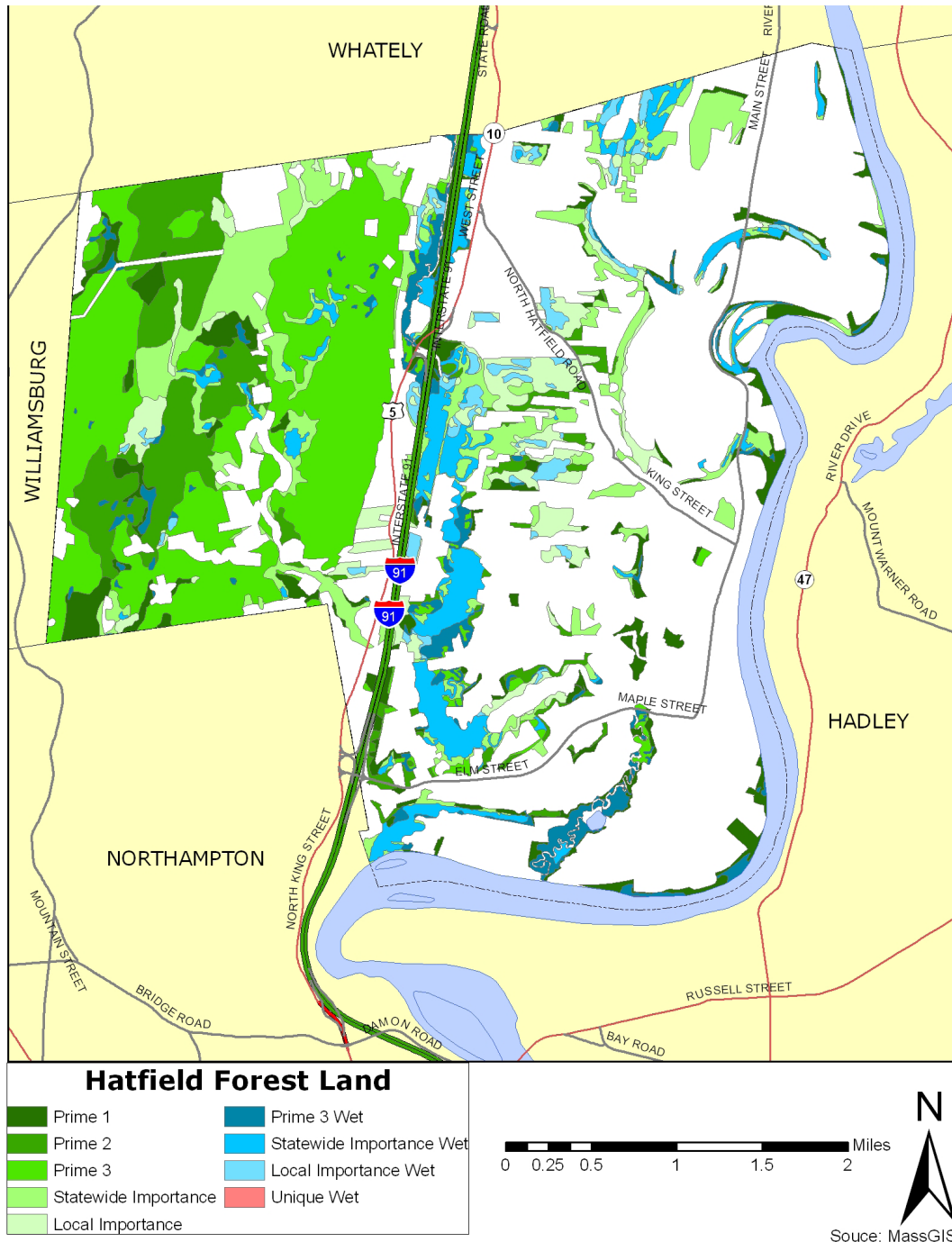
Hatfield is a Town whose land is heavily influenced by watercourses. There are approximately 35 miles of stream and river Channel within the Town boundaries, primarily consisting of the Connecticut River, the Mill River, Running Gutter Brook, Mountain Brook, and Broad Brook. Most significantly, the Connecticut River runs for about 7.5 miles along the eastern and southern boundaries of Hatfield, providing approximately 450 acres of open water with serves has habitat for over 30 species of fish 23 including shad, walleye, northern pike, and catfish. Also, hosting a wide plethora of other wildlife, the Connecticut River is part of the most biologically diverse river system in Massachusetts. Forestland provides a vegetated buffer to human activities at several points along the river. Much of this forest area however is quite narrow being less than 200 feet deep at many points. A majority of the riverbank, however, remains unprotected from development.

In addition to the Connecticut River, the town of Hatfield is also host to great areas of wetlands, which constitute about 30% of the town's total area. Most of these wetlands, which are concentrated in the northeastern portion of town around Great Pond and the old oxbow, include the open water of streams and ponds, shrub swamps, forested swamps, wet meadows, bogs, marshes, beaver ponds, and land within the flood water elevation of the 100-year floodplain. These wetlands are vital habitats for great amounts of wildlife and are home to frogs, fish, freshwater clams and mussels, beaver, muskrats, great blue herons, waterfowl, and bitterns.

Hydrology:



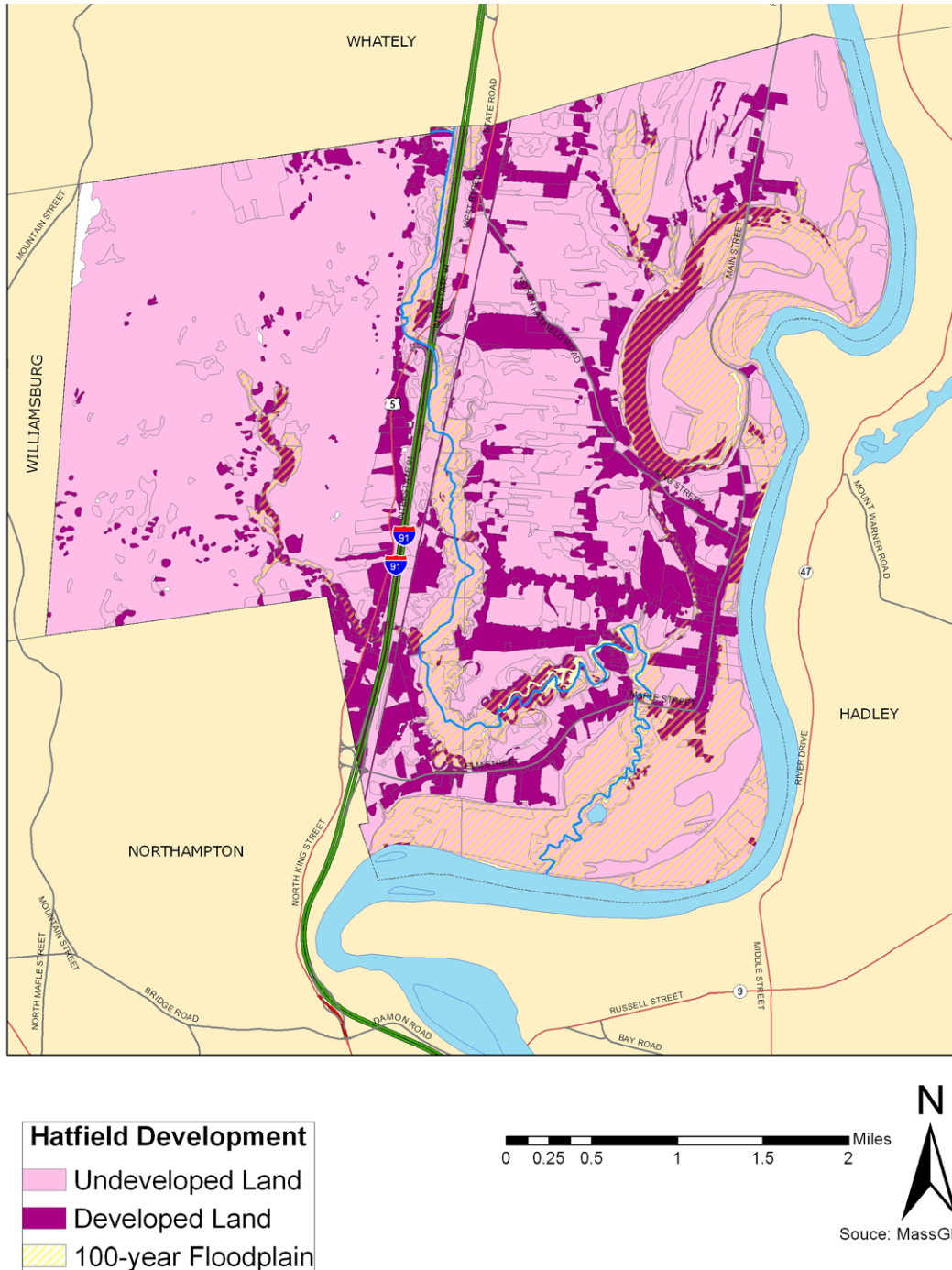
Prime Forest Land:



This forested area which lies primarily to the west of I-91 covers approximately 4,800 acres making up 45% of Hatfield's land area and is categorized as a transition zone. The town falls in an area where there is a blending of the southern oak-hickory forests and the northern maple-birch climax forest types. Additionally, there is an abundance of eastern white pines.

Within this densely wooded terrain, outcroppings of bedrock alternate with small pockets of wetlands. Most of these small swamps drain into the Running Gutter Brook, a clear clean brook flowing through the reservoir which serves as the primary stream draining these western Hatfield hills.

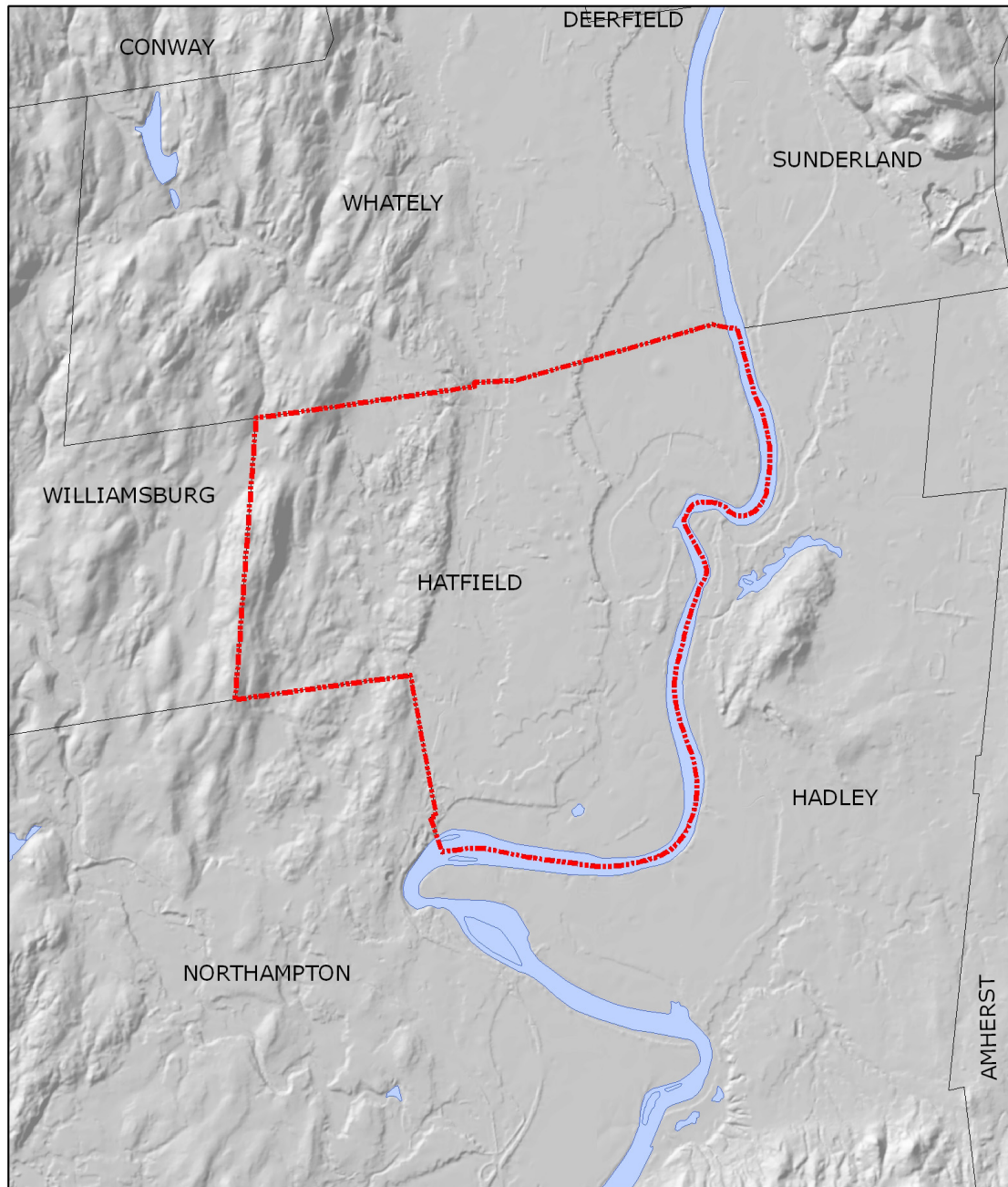
Developed Land:



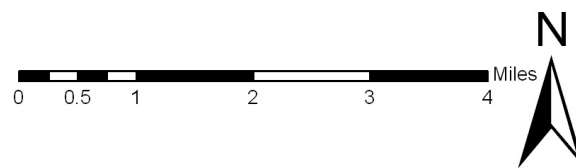
This map shows the development patterns in the Town of Hatfield. The majority of the development is found East of Interstate 91, along with a corridor of development that follows Routes 5 and 10.

There are only small pockets of residential development to the West of Interstate 91.

Regional Topography:



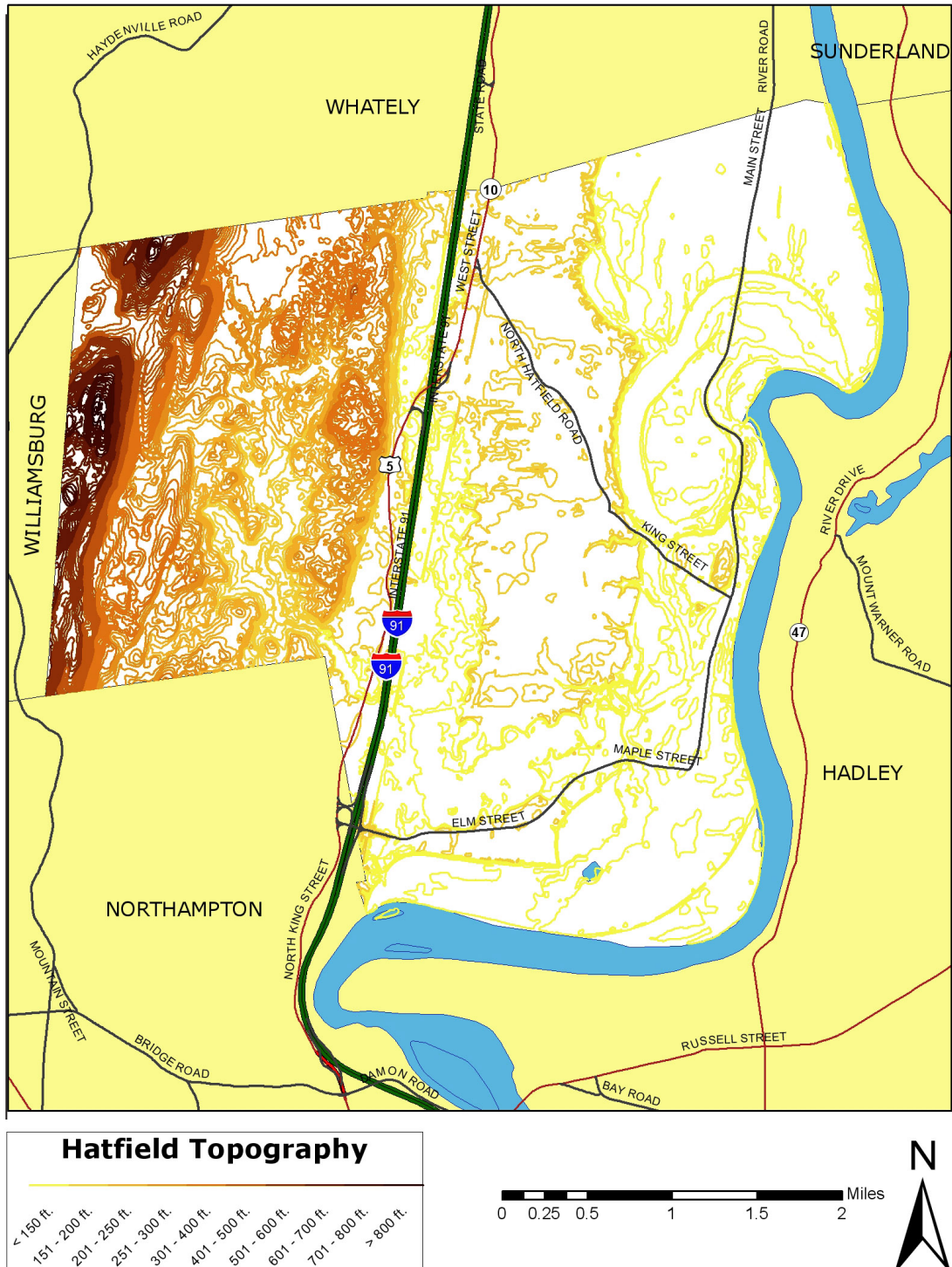
Regional Topography



The topography is shown in this map. The Connecticut River Valley can easily be seen, along with the mountainous region on the West side of the river.

The map on the following page shows the topography of Hatfield in greater detail.

Hatfield Topography:

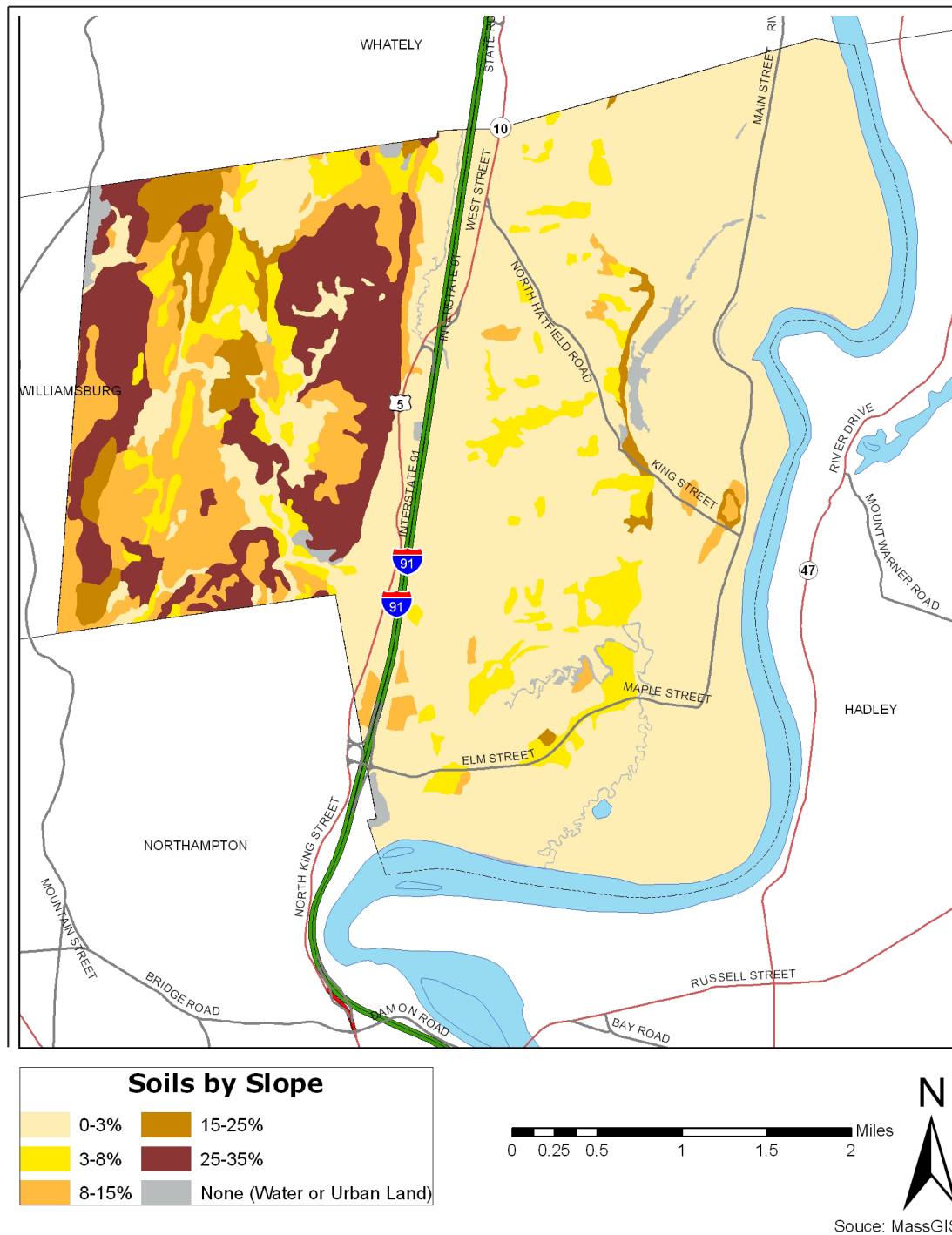


Source: MassGIS

In the western highland of Hatfield is primarily wooded area. Within these steep, rocky wooded slopes are three main natural features: the "Rocks", Horse Mountain, and Chestnut Mountain. With elevations reaching as high as 840 feet above sea level and with steep slopes ranging from 5 to greater than 15%, much of this land is NOT readily developable.

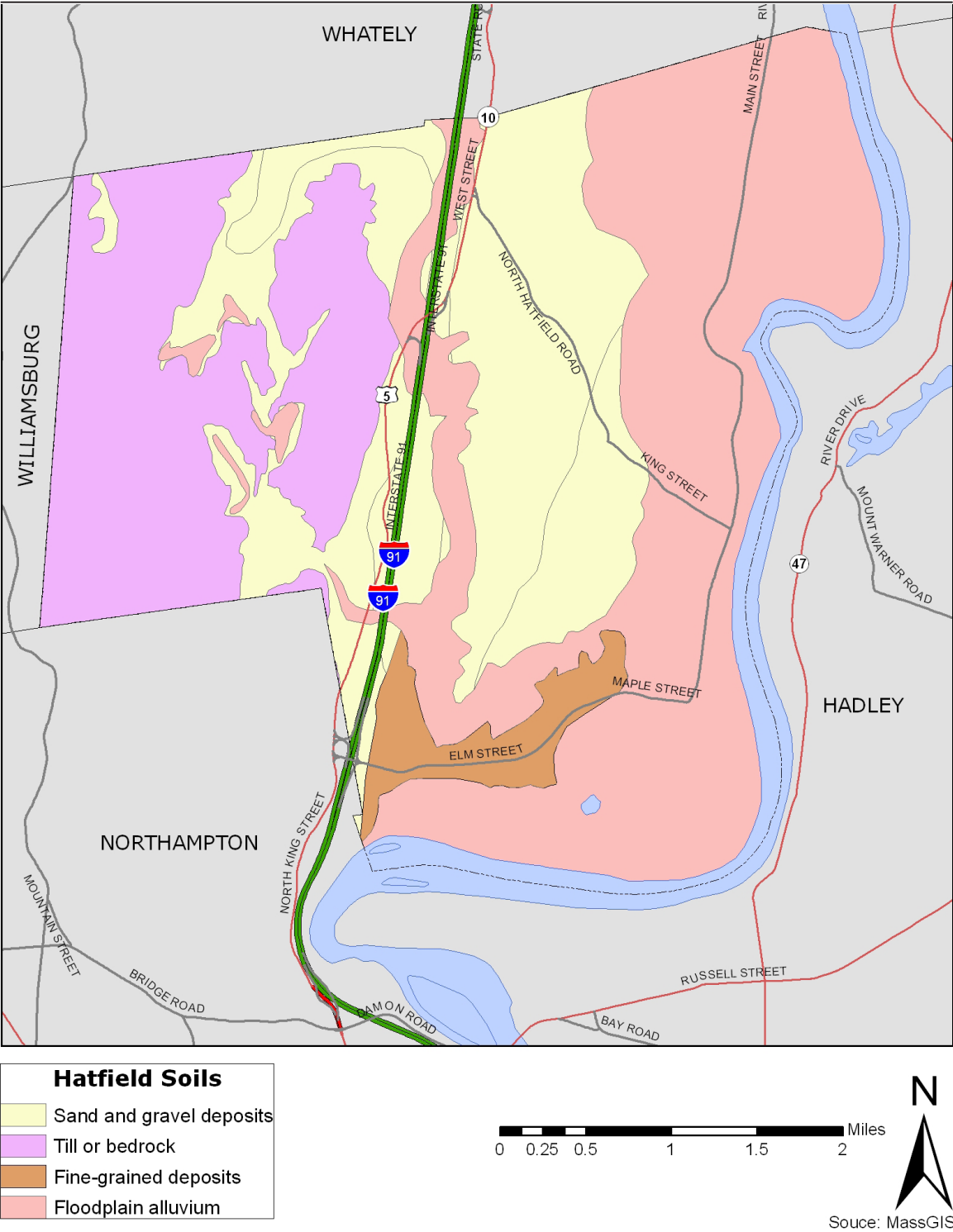
The "Rocks" is a steeply rising, rugged north to south ridgeline with much exposed bedrock that forms the easterly boundary of West Hatfield.

Soils by Slope:



The wide variety of slopes can be seen on this map. The soils within the Horse Mountain and Rocks region are very thin, generally poorly drained and wet, with shallow bedrock. The nature of these soils poses moderate to severe limitations on intensive development. Thus, this rugged wooded hilly landscape is valuable to the Town as source of water and a potential for recreational possibilities.

Soils:



The varying soil types in Hatfield are displayed in this map. Floodplane alluvium dominates the lowlands, while the western mountains are comprised of mostly till and bedrock.

Mill River and Connecticut River Corridors:

The Mill and Connecticut Rivers are very important to the town of Hatfield. The Mill River boasts one of the most diverse ecosystems in all of Massachusetts, and the Connecticut River has historically played a great role in the success of Hatfield's agricultural heritage.

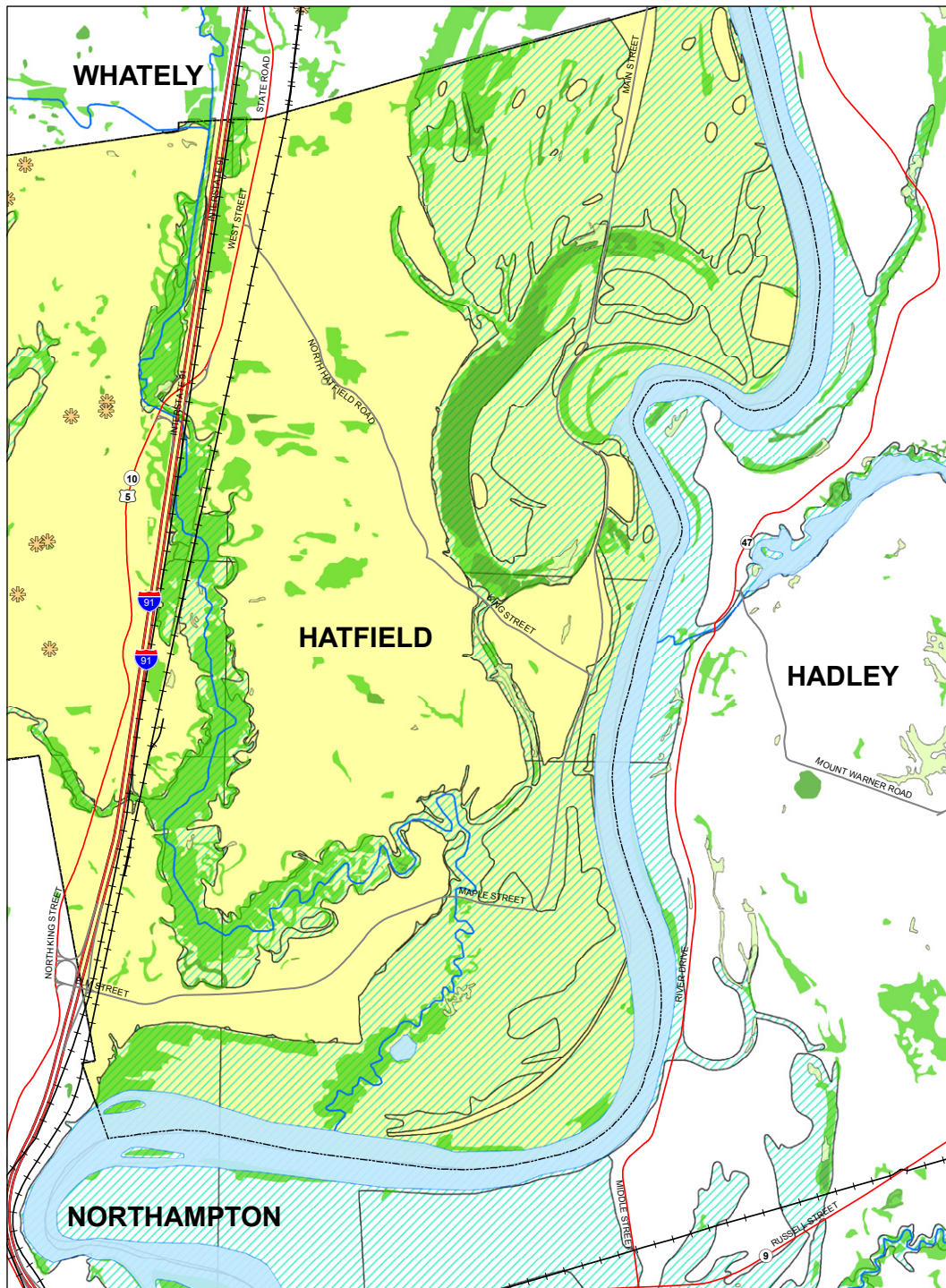
Both of these rivers corridors present a great opportunity for recreation, however both are under-utilized. The Connecticut suffers from being just out of sight from downtown, despite being less than a 1/4 mile away. There are also limited access points, and Bashin Beach is known as a teenager hangout, possibly keeping some people away.

The Mill River also suffers from a lack of access points, and is divided by an old dam. This dam essentially creates two different types of rivers; above and below the barrier.

Flood Plain-Marsh-Vernal Pools

Hatfield's diverse landscape is identified with its various natural resources outlined and recognized. The flood plain is acknowledged with a green hatch, and is an outcome from the seasonal flooding of the Connecticut River and Mill River, the two major riparian corridors that play a complex roll in the town's landscape.

The resulting classifications of the marsh typologies are then summarized by shades of green. The thought of ecological sensitivity can now take form and understood. Major transportation routes are also recognized with Interstate 95, Route 5 and 10 as well as a functioning rail line to the west. We then can relate these major corridors to the effects on the town wildlife and natural resources.



Flood Plain - Marsh - Vernal Pools with Major Transportation

Major Roads

Road Classification

- Limited Access Highway
- Multi-lane Hwy
- Other Numbered Highway
- Major Road

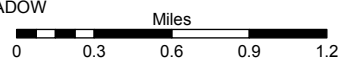
Rail Line

- Connecticut River
- Mill River
- Flood Plain

Marsh

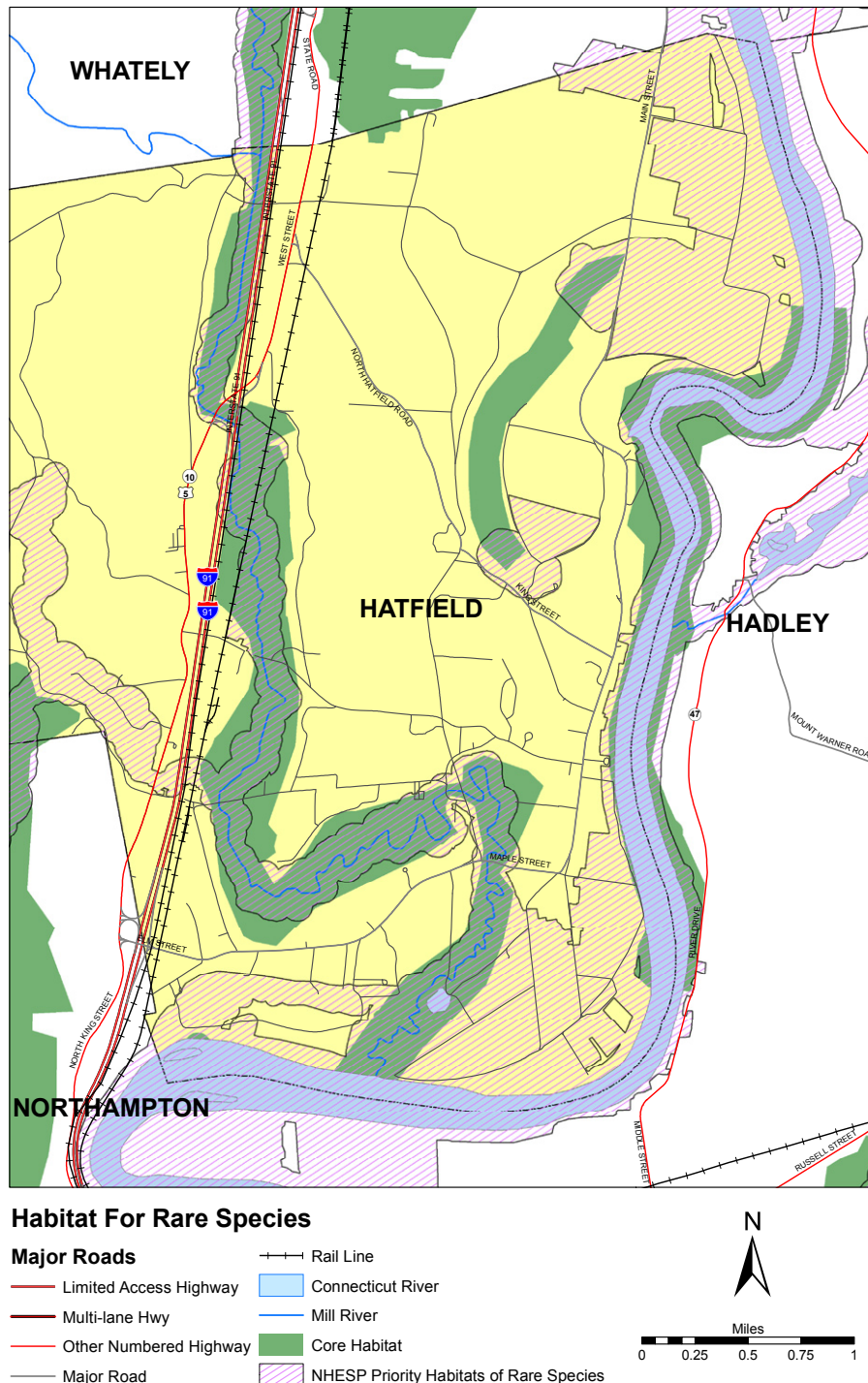
Marsh Type

- DEEP MARSH
- SHALLOW MARSH MEADOW
- WOODED SWAMP
- Vernal Pool



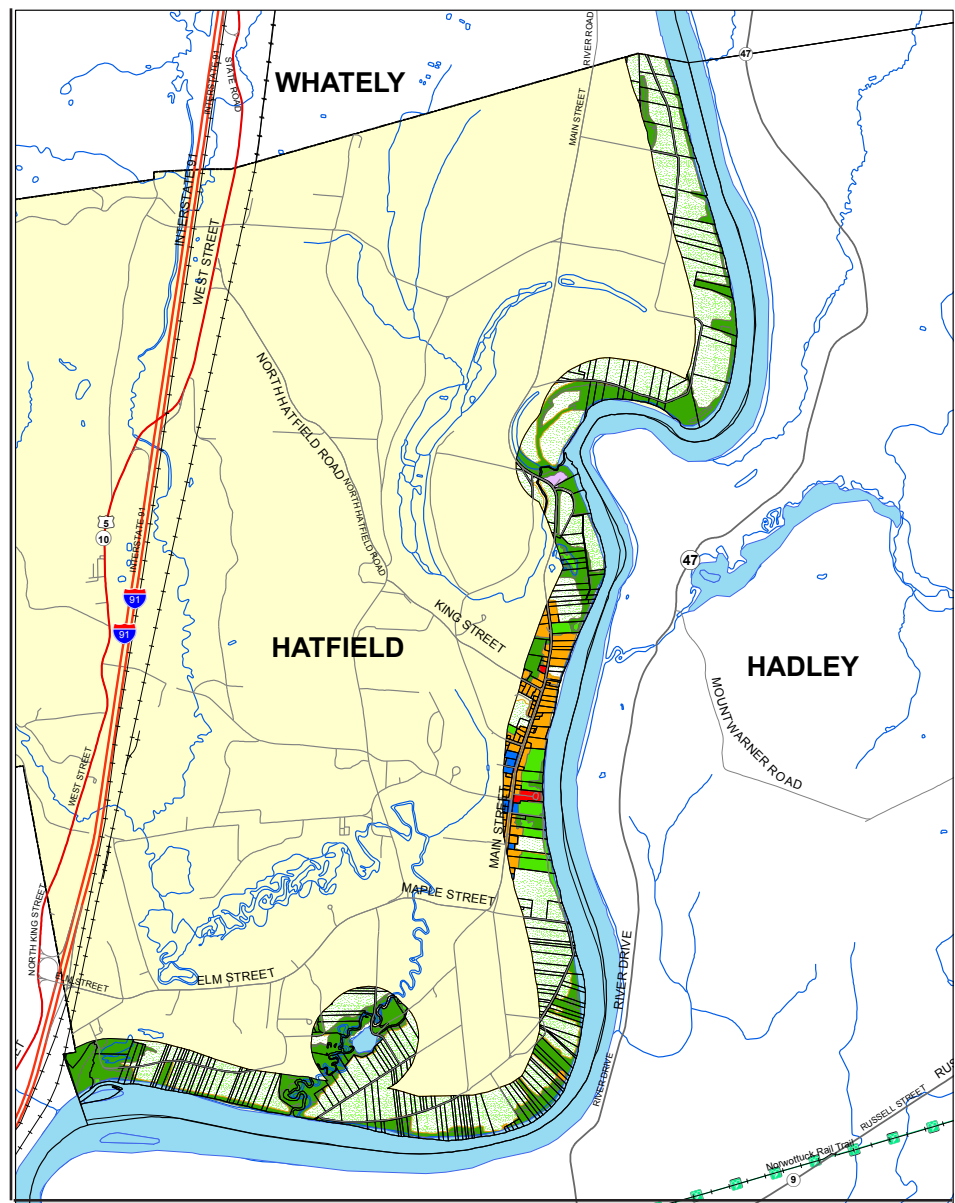
Habitat for Rare Species:

The wildlife corridors are highlights by the red hatch and have been identified by the NHESP as bio-core habitat for the endangered wildlife in the area. The bio-core habitat is primarily located and derived from the Connecticut and mill river corridors. These sensitive areas are to be dealt with care, and well thought out approaches to ensure a minimal impact on the respective habitats. The major transportation corridors have also been identified to see their relationship to these susceptible regions.



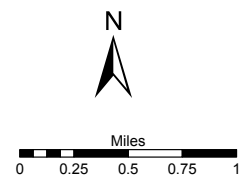
Land Use with in 1000 Feet of the Connecticut River

The impacts of development directly abutting the Connecticut River can have a less than optimal effect on the rivers wildlife habitat for both aquatic and land flora and fauna. This map conveys the various types of land use within 1000 feet the river and the overstepping of the 200-foot buffer reserved for un-development by the State of Massachusetts in it wetland preservation act. The effect of development in proximity to the river is a challenge to be dealt with in the future development of Hatfield.



Hatfield Land Use with in 1000 Feet of Connecticut River

- | | |
|------------------------|----------------------------------|
| Major EOT Roads | Landuse With in 1000 Feet |
| — Interstate | ■ Commercial |
| — U.S. Highway | ■ Agriculture |
| — State Route | ■ Forest |
| — Non-numbered route | ■ Residential |
| — Roads | ■ Open Space |
| — Rail Line | ■ Urban Public/Institutional |
| | ■ Industrial |



Hatfield Open Space Assessment:

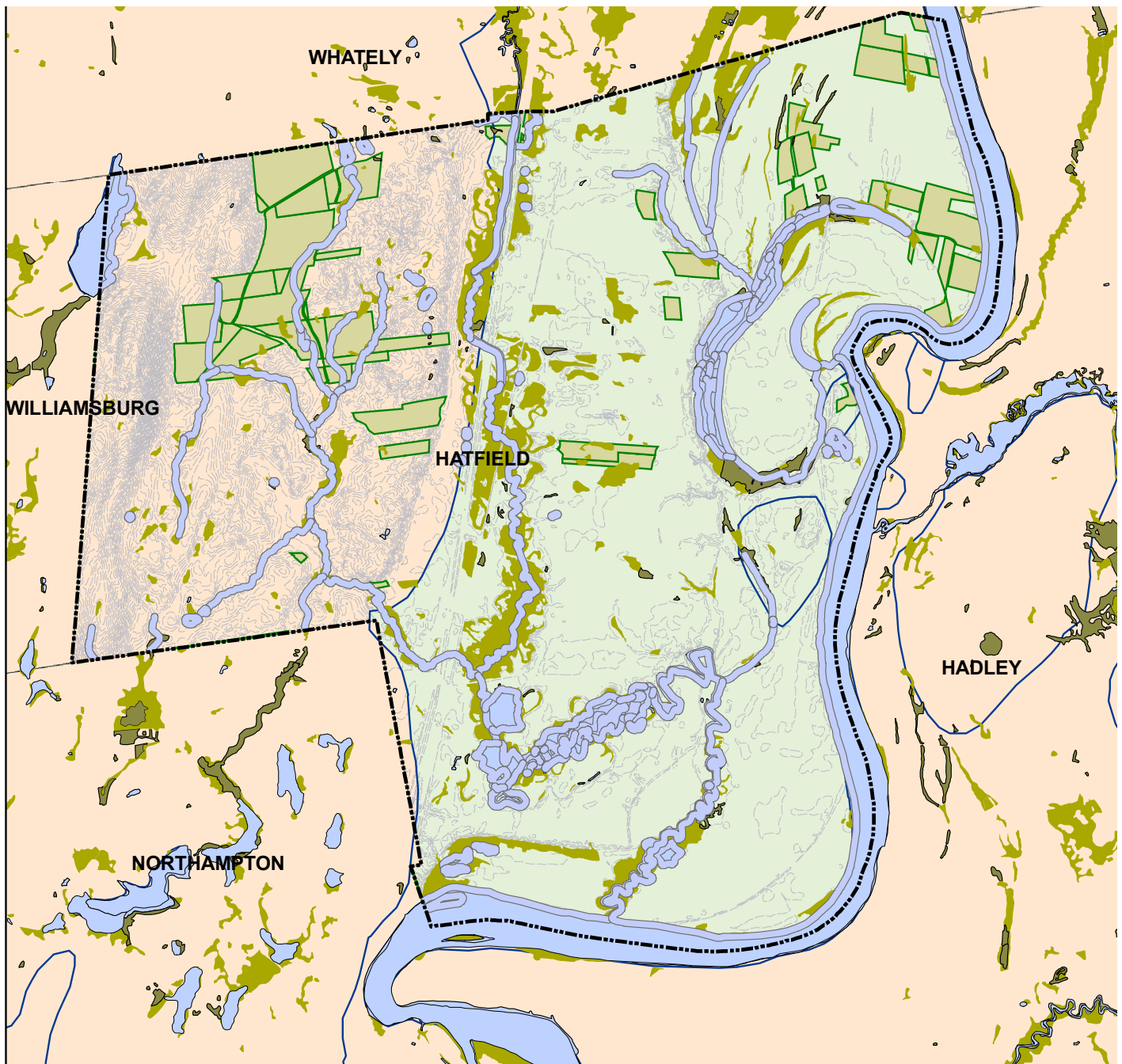
Hatfield's Open Space and Recreation plan was created in 2008 with an overall objective to provide recreational opportunities to the town as well as protect the valuable natural resources and open space that are currently already abundant there. More specifically, these goals will include preserving the Community Character, Protecting their farmland, water supply, woodlands, wetlands and floodplains, and provide adequate recreation spaces. The three most valued features of the Town continue to be its rural character, open space, and working farms. Hatfield residents recognize that growth is inevitable ,but they want it to be done in a manner respective of the community's character.

Hatfield's landmass is entirely situated within the Connecticut River Watershed. All naturally draining surface water eventually finds its way to the Connecticut River, which forms about 7.5 miles of the Town's eastern and southeastern boundaries. The Connecticut River, as well as the Mill River, plays a huge role in the physical and cultural landscape of Hatfield and its protection is something the town holds a great importance to. As of now, The town of Hatfield and the water department own about 529 acres of the area's protected land. The water department oversees management of the land that contains the town reservoir, wells and the surrounding watershed. The watershed is protected under a supply protection zoning district that restricts land-use in these critical recharge areas. Agricultural and residential zoned land lays adjacent to the watershed protected area. This land currently serves as an important wildlife habitat with solely dirt roads for idea passive recreation like hiking, skiing, or horseback riding throughout every season.

To keep the majority of the privately owned land protected, the state has offered owners a tax saving in exchange for agreeing to keep their land for agricultural, managed forest, or recreation purposes for varying periods of time. The privately owned lands are primarily east of I-91 in the flat, agricultural lands which are most vulnerable to development. However, a lot of this land is in the floodplain so their is a constraint on building. Other protected lands in Hatfield include private properties under state programs like the Agricultural Preservation Restriction program and Forest Legacy programs. The town does want development and growth to support its financial needs, but they want to make sure their open spaces containing their natural resources and cultural landscapes remain intact and protected. Adopting zoning regulations to safeguard floodplains, rivers, wetlands, watersheds, and wildlife habitats will sustain Hatfield's ecological richness.

Aside from the restricted watershed lands, there are also established and preserved landscapes in the town that are open for public use and recreation. The Cahillane Conservation area is in the southern tip of Hatfield, protected in perpetuity, and owned by the Valley Land Fund. Chestnut Mountain is located in the northwest section of Town and rises approximately 740 ft. above sea level. Much of this area is part of the Northampton Mountain Street reservoir and protected as open space. Chestnut Mountain, as well as Horse Mountain, provide opportunities for hiking, snowmobiling, horseback riding, and hunting as well as being an important wildlife habitat.

The "Rocks" is a north to south ridgeline forming the easterly boundary of West Hatfield with much exposed bedrock, steeply rising, and rugged terrain. In the Open space and Recreation plan, there is recognized potential for a series of trails to connect Horse Mountain, Chestnut Mountain and the "Rocks". The Hatfield reservoir, located between the Rocks and Horse Mountains, is approximately 300 acres of wooded land, mainly mixed stand of hardwood and softwood. This is an important wildlife area with Running Gutter Brook flowing to and from the reservoir. This area contains recreational and water supply functions along with the habitat of endangered species. There are small falls as well, which further enhance the beauty of the stream.



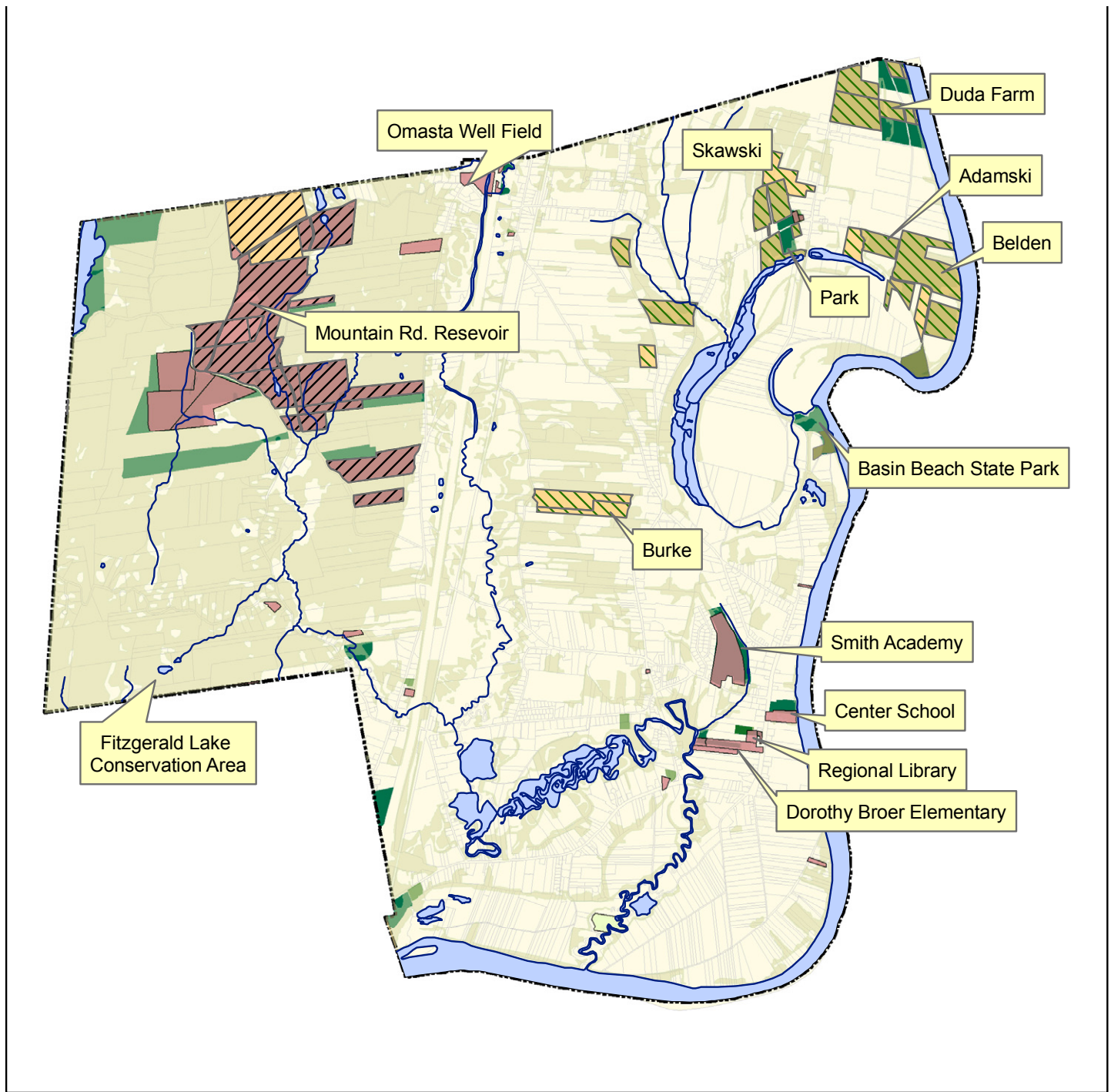
Restricted Land from Development

- | | |
|----------------------------------|----------------------|
| Hatfield Boundary | Protected Open Space |
| Connecticut River Buffer | Ridgelines |
| Connecticut River | Aquifer |
| Bogs and Marsh | Surrounding Towns |
| Large bodies of Water | |
| Swamps-Forested and Non-Forested | |
| Aquifer Streams | |

0 390 780 1,560 2,340 3,120
Meters



Source: MassGIS



Private Land with Open Space Protection

- Major Streams
- Connecticut River

Private Land Divisions

- Division of State Parks and Recreation
- Department of Agricultural Resources

Ownership of Open Space

- Dept. state park and rec
- Dept. Fish and Game
- Hatfield water supply
- private

Land Use

- Forest
- Cemetery
- Hatfield Boundary
- Public Protected Land
- Parcels



Source: MassGIS

Recreation Assessment:

From the description of the town's open space and preservation areas, it is easy to see why Hatfield is not only set on keeping those lands protected, but also willing to showcase them in a manner that provides people a chance to get closer with nature while also providing recreational uses within the open spaces. The town has existing recreational land, but they are hoping to upgrade the quality of these lands and their facilities since many have become overcrowded. The existing recreational lands are as follows:
(Source: Hatfield Open Space Plan)

River Recreation:

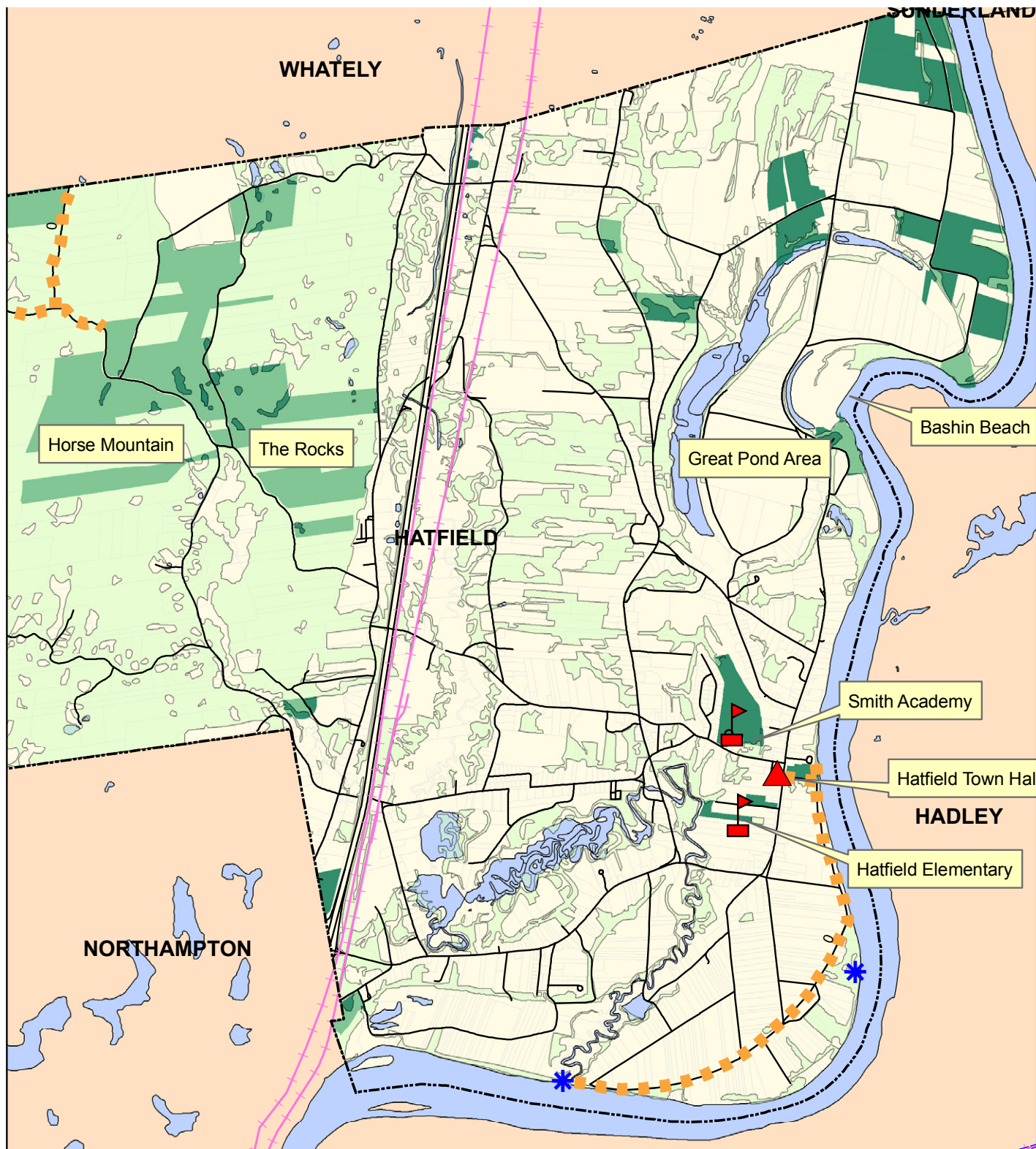
The State Boat Ramp: The Commonwealth of Massachusetts owns 5.7± acres near Kellogg Hill Rd. for use as a public boat ramp. It serves as one of the few access points to the river from the west bank in this area. Parking is provided for regional and local users in the three seasons. The parcel is large enough to accommodate further picnic or recreational facilities.

Connecticut River Access: This 1.8-acre parcel is owned by the Town and is currently unused. Fronting the Connecticut River, this spot could be turned into a beach and picnic area.

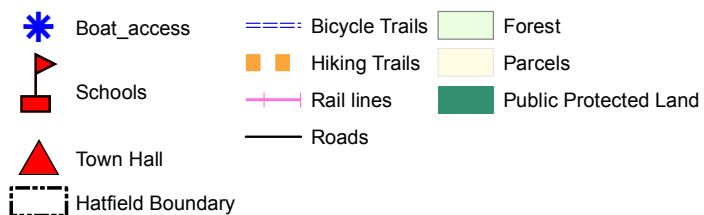
Bashin Beach: Owned by the Commonwealth of Massachusetts as part of the Connecticut River Greenway. This beach and swimming area has few amenities but is an important recreational facility in Hatfield. This area is not maintained and shows evidence of litter and lacks sanitary facilities. Given its lack of development, it is not particularly safe or attractive as a swimming area and does not meet the outdoor recreational needs of many Hatfield families.

Trails:

The Connecticut River Dike Road: The dike road is beautiful, accessible, easy to navigate and offers some of the best views of the Connecticut River in the region. Local residents frequently use the Dike Road for walking or biking in the summer and cross-country skiing in the winter. Running southward from the Town center, the Dike Road connects with three Town roads—Bridge Lane, South Street, and Valley Street that offer the potential for loop connections off the dike road.



Hatfield Recreational Destinations



0 0.150.3 0.6 0.9 1.2 Miles



Source: MassGIS

Park and School Grounds:

Smith Academy Land: In the center of Town on the corner of School and Main Streets, the Trustees of Smith Academy own a 1± acres parcel used as a low intensity Town park. It is adequately maintained with no amenities. Suggestions have been made to improve and make it more inviting for residents to use for passive recreation.

Hatfield Elementary School Grounds: The fields in back of the Breor School have been one of the major sites in Town for outdoor athletics. Used both by the school and community groups. Two potential soccer fields and two baseball/softball fields included in the new construction plans.

The fields in back of the Breor School have been used by both school and community groups as one of the major sites for outdoor athletics. In addition, school construction has resulted in the elimination of two tennis and basketball courts that fell within the new building's footprint.

Smith Academy Fields: The 38 ± acres around Smith Academy, the Town's public High School, have 2 baseball diamonds, 2 softball fields, 1 soccer field, and 1 outdoor basketball court. They are most heavily used by the school system, but other groups may use the field with permission from the school committee. In the summer the Recreation Department uses the fields for summer programming. There is undeveloped land available in this tract for field expansion if the need arises.

The Old Center School Grounds: Old school in the center of Town offers additional opportunity for field sports. This 6± acres parcel, owned and managed by the Town, has a baseball and softball diamond, and a field hockey field. The area also connects with the dike and thus is contiguous with the river. The portion that is contiguous to the river is underutilized and constitutes one of the most promising areas for the expansion of outdoor recreational facilities.

Recreational Facilities:

Lions Club Pavilion: An outdoor covered pavilion on the grounds of the Hatfield Elementary School that services various private and community groups for barbecues, dance festivals and celebrations. It is rustic but adequate for its use in good weather and has restroom facilities.

DARE Youth Center: Antiquated building in need of extensive repairs as well as updates to meet current State ADA access requirements. It provides many activities for the youth of Hatfield that are not available elsewhere in Town, including a pool table, arcade machines, a jukebox, computers, a TV, bingo, and candy/soda machines. It is open only on a limited basis (Friday nights, 6-9 p.m.) due to lack of adequate adult supervision. Outside activities adjacent to the building include a basketball court, and in the past an ice skating rink.



0 0.1 0.2 0.4 0.6 0.8 Miles

Town Center and Surrounding Trails

- | | | |
|------------------|-------------------|-------------|
| ▲ Town Halls | 🚩 Schools | 🟢 Open Land |
| ✳ Boat access | —●— hiking trails | 🟤 Cemetery |
| ⋯ Bicycle Trails | ⋈ Rail Lines | 🟡 Parcels |
| | — Roads | |



Source: MassGIS

Residents have envisioned a more vibrant and lively Town Center with this open space and recreation plan. Places like the Center School & School Street School Grounds are envisioned as inhabited buildings and riverfront parks that will breathe new life into the center of Town. The Hatfield Elementary School property and Smith Academy Park are also envisioned as inviting and accessible parks capable of hosting small and large town events. Parcels like the one behind the Town Cemetery hope to become sites for active leisure activity such as ice skating or community gardens until a different municipal purpose is needed. The Hatfield Mill Area is envisioned as a recreation and leisure destination as well. The Dike Road is one of the town's most sought after recreational resources. There have been discussions in the past about officially designating the Dike Road as a recreational path with signage and publicity, but no further action has been taken. The town would love for UMASS to design a system of trails and establish a formal trail system with guidebooks and maps that residents can easily download from the Town website. The implementation of the Dike Road could serve as the anchor in a larger trail network that may one day reach into Northampton and beyond.

Open Space and Recreation Plan overall Goals:

A thorough assessment of Hadley's landscape and development pressures has been achieved within the Open Space and Recreation Plan of 1998. However, a number of issues remain unresolved in terms of the town's long-range open space goals.

Open space trends were discussed among Hadley residents through open forums, meetings, and surveys to establish an updated set of open space and recreation goals. These goals are as follows:

Goal 1: Establish mechanism for the active protection and long term maintenance of open space.

Goal 1's objectives are to pursue long-term open space funding mechanisms, Create open space management standards for lands protected through zoning, and pursue and enhance alternative open space protection mechanisms such as land trusts and donations. They need to acquire conservation land as well. The long term health of open space in Hadley is directly related to how well the town can maintain and protect its open space.

Goal 2: Offer recreation opportunities to residents

Objectives for Goal 2 are mainly to improve and expand recreation opportunities, including playing fields, parks and playgrounds, Continue and enhance recreational activities available to the elderly through the Council on Aging and other older groups.

Goal 3: Preserve lands for passive recreation

This can be done through the purchase of conservation lands in a comprehensive and prioritized manner and by developing nature trails and other means to connect and integrate conservation lands. A major portion of Hadley's open space is used for passive recreation, such as hiking, biking, boating and bird watching.

Goal 4: improve access to existing open space resources and the Connecticut River

Specifically, this means to improve access, signage and parking facilities for open space areas and to work with Massachusetts Department of Conservation and Recreation to provide greater town access to State lands along the Connecticut River. The Connecticut River is an asset underutilized by the citizens of Hadley due to lack of public access. Most access is crossing through private property.

Goal 5: Create an open space network

Where practical, link large areas of open space together to form a comprehensive and use open space network for natural storm water management. An interconnected open space network is not only to allow for easy movement between various areas, but also to protect and enhance the habitat and ecosystems within the town.

Hatfield Greenway Proposal:

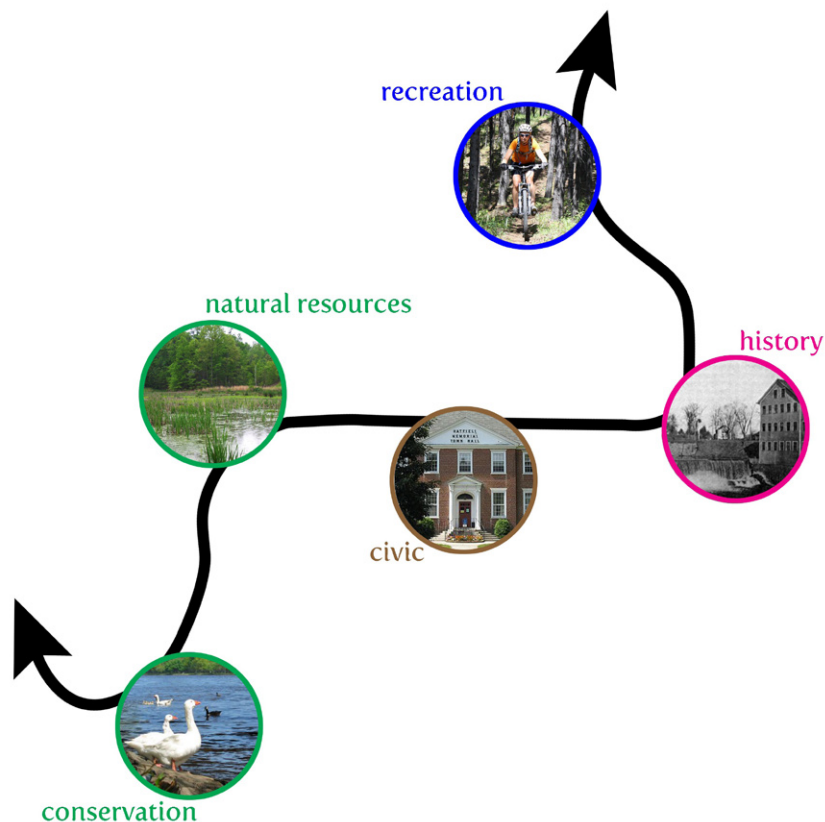
Introduction:

Our team is proposing a Greenway network throughout the town of Hatfield to reinforce the town's existing unique qualities and connect them in a more fluid way. As it stands now, Hatfield's abundance of diverse landscapes-agricultural, forested, historic, and civic-are fragmented within the town as you travel further from its center. There is a multitude of wildlife and natural resources that can be explored, especially along the Mill and Connecticut River, if given the access to do so. Our Greenway proposal hopes to connect these landscapes through a series of gathering spaces and recreational trails that will give residents pedestrian and bike accessibility to these various points of interest throughout the town.

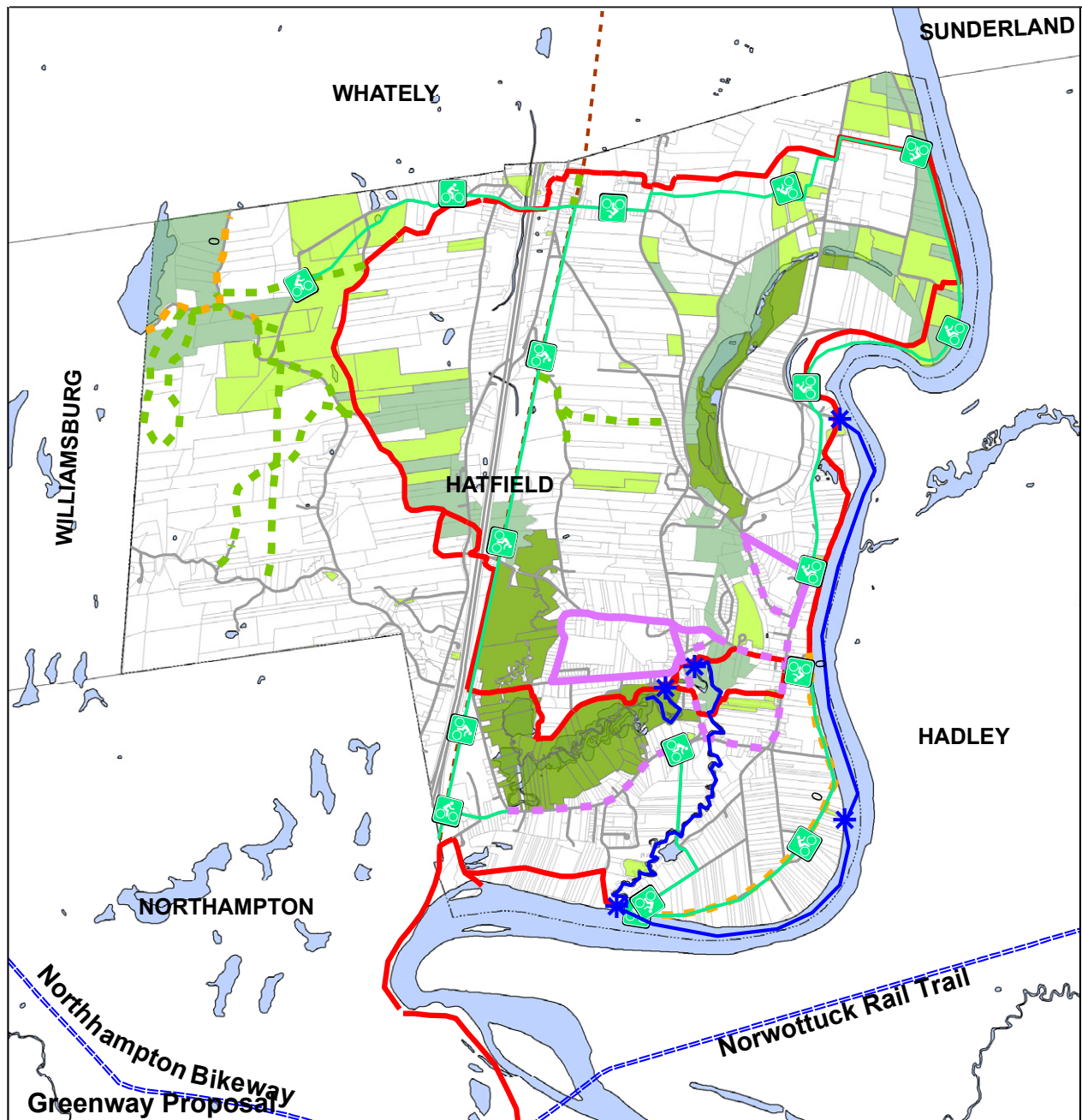
Greenway Proposal Map:

Our proposed Greenway for Hatfield is a 16.3 mile long loop within the town and 2.14 miles reaching out to the Northhampton Norwottock bike trail. The Loop starts and ends in the Southwest corner of the town on the Northhampton border and continues along the town's existing dike road to the town center and through a diversity of landscapes that range from wetland and agricultural, to forested and mountainous. We have connected the town's most valued farm stands, historic districts, recreational and civic spaces, while providing additional smaller park spaces and secondary hiking trails.

Aside from the greenway on land, we have also created a "blue-way" system among the Mill and Connecticut river with boat access points for people to canoe or kayak from. The blue-way's serve as a way for people to explore the natural resources and wildlife that reside in these river corridors.



Greenway Proposal:



- | | | |
|------------------------|-------------------------|-------------------------|
| Boat Access | Secondary Hiking Trails | Proposed Protected Land |
| Blueway Trail | Existing Trails | Protected Wetland Areas |
| Proposed Biking Trails | Proposed Greenway Trail | Hatfield Boundary |
| Proposed Sidewalks | Long Distance trails | Large Water Sources |
| Sidewalks | Bicycle Trails | Parcels |
| | Roads | |
| | Protected Open Space | |



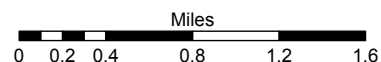
Proposed Protected Land Map:

Conservation was a key point we wanted to focus on with our greenway. Currently, the town has scattered parcels of protected open space as well as protected wetland areas along the Mill River and Great Pond area. We have proposed to connect these protected wetland and open space parcels to create one major swath across the town to keep further development from occurring and create a continuous corridor for wildlife to travel along.



Existing and Proposed Protected Space

Hatfield Boundary	Currently Protected Wetland areas
Parcels	Proposed Protected Land selection
Open Water	Protected Open Space
Wetland	



Source: Mass GIS

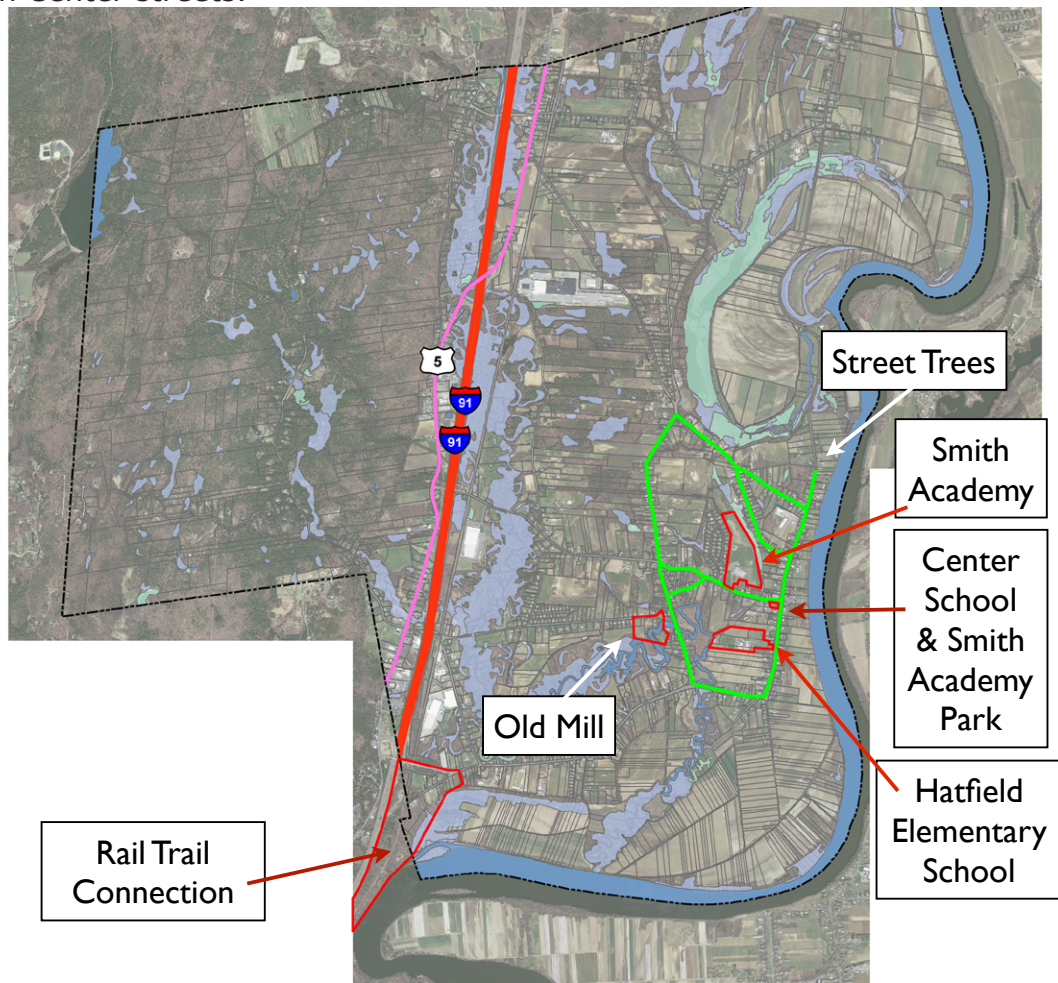
Town Center Focus Plan:

This is a zoomed-in map of our Greenway Proposal showing the focus areas and how the trails fall along the streets. These areas will be discussed in great detail in the following pages.



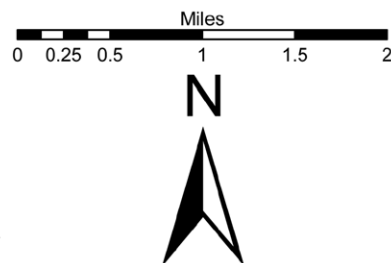
Focus Areas:

Each team member explored and designed a focus area along the Greenway that would be modified to benefit the concept of the proposal. The focus areas are in close proximity to the Town Center based on opinions voiced by residents in the open space and recreation plan done in 2008. They hope to bring a greater sense of community to the town and enhance its character, starting with its center. The focus area's within the town center included The Smith Academy School Grounds, The trustees of Smith Academy park, The Center School Grounds and Hatfield Elementary School Grounds. A focus area of the historic Hatfield Mill property was also addressed as well as the Elm Court connection between Hatfield's greenway and Northhampton's Norwottock trail. In addition to these spaces and trails, our team also did an analysis of the town center's street trees and provided recommendations for sustainable plant species and upkeep. This plan will improve the health and quality of the trees as well as improve the aesthetic value of the Town Center streets.



Source: MassGIS

Individual Focus Areas



Smith Academy School Grounds:

Smith Academy is Hatfield's High School located on a 38 acre parcel of land that hosts the majority of the town sports fields. It is located on School St. in the town center. One focus of this area was to create a better connection to the civic spaces in the town center as well as the surrounding neighborhoods so kids can easily get to and from school. A second focus of the area was to create a more vibrant recreational space by building off the existing features of the site.

To create safe and easy access to the Academy, we have proposed extending and improving the sidewalks from Main St. along School St. on both sides of the street. The sidewalk will extend to the entrances of smaller neighborhood loops so kids can travel along the road to school. Multiple entrances have also been added along the perimeter of the School grounds to give residents immediate access to the school and its amenities.



(Created by
Rachel Grigorian)

A 1.2 mile exercise trail connects the newly added access points on the grounds and brings people on a loop around the property. The exercise trail will provide leisure recreation for town residents while also providing the school sports teams a route to run. Signage and small stations can be set up if the town chooses to promote different aerobic exercises along the path.

A woodland buffer has been added to the existing patches to both separate the grounds from the surrounding residential neighborhoods and also create a more forested feel to the trail.



(Created by
Rachel Grigorian)

Existing features of the site that have been improved includes the baseball and softball fields and a small retention pond area. Currently, the fields are just placed sporadically on the property with no significant marking or seating to make it an attraction. Fences and built dug-outs as well as bleacher-style seating have been added to the fields to make them more attractive and comfortable to spectators. The new path system also brings people directly past the fields making it a possible destination.



The existing pond has been turned into a destination with seating and docks that bring people out to the water throughout every season. It can be used both recreationally and educationally in the warmer months and used for ice skating in the winter.



New points of interest on the site includes a small promontory resting area off the trail and 2 new tennis courts. The promontory space is a halfway point on the loop and is also located at the trail entrance from N. Pleasant Drive. It has arching berms of landform that protect the space from the trail behind and directs peoples view over the property towards the school.



The Smith Academy plan is beneficial to both students and residents of Hatfield and is a low impact design that will utilize the full 38 acres throughout every season, promoting both recreation and conservation of the wooded and open space.

Trustees of Smith Academy Park:

The Trustees of Smith Academy Park is a 1 acre lot located next to the Town Hall on the corner of School St. and Main St. in Hatfield's town center. The park is connected to Smith Academy on the greenway by tree-lined sidewalks on School St. There is also a connection to the greenway trail leading to Hatfield Elementary School through the forest patches off school st. next to the post office.

The park currently consists of one small enclosed space with benches in the center of the park that residents hardly use. The focus for this area was to open up the park to the surrounding streets and create a series of small spaces that appeals and caters to residents of all ages, especially Smith Academy students and residents of the elderly care center, both located in close proximity to the park.

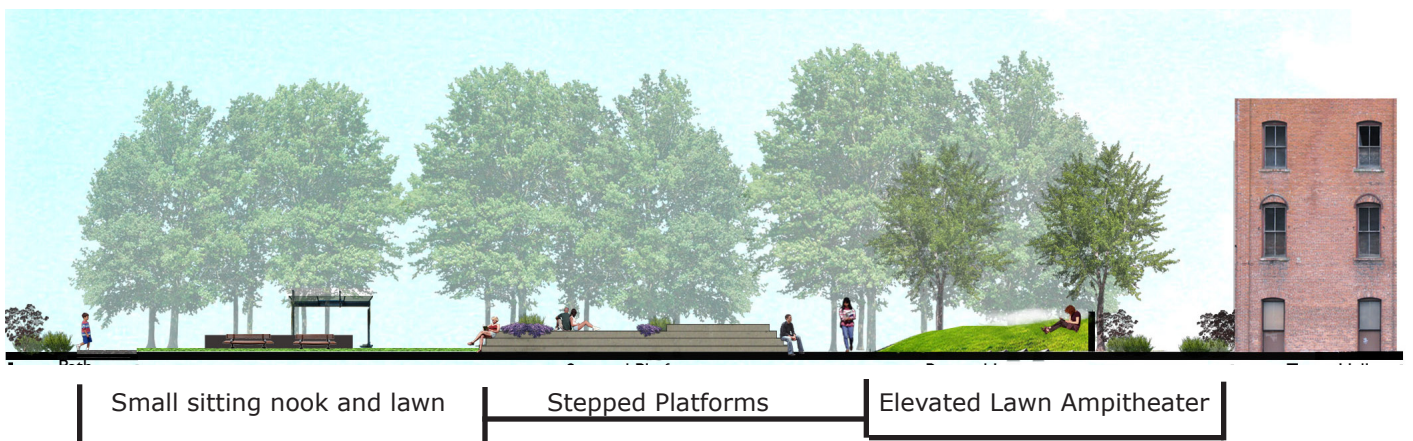


(Created by Rachel Grigorian)



(Created by Rachel Grigorian)

The center of the park holds a large curbed lawn attached to a series of stepped platforms. The platforms can be used in a variety of ways for seating or for small performances put on by students after school. Directly facing the platforms is a large sloped amphitheater-style lawn that can be used for seating during performances or just relaxing. Smaller spaces along the perimeter of the park are more open to the streets so people walking through town can sit in these more intimate spaces without having to be apart of what's going on inside the park. A bus stop for a PVTA bus-line has been included in the design if the town can get PVTA to run a bus through the area a couple times a day to bring people to the surrounding towns like Northhampton.



(Created by Rachel Grigorian)

The design for the Trustees of Smith Academy Park will provide a more public and inviting space to all residents passing through or working in the area. It not only has the ability to host events but it also promotes daily interactions between residents whether they're just taking their lunch break or stopping to rest from biking along the greenway loop.

Center School:

Our group has proposed that the currently unused Center School be transformed into a youth center or community center in the town of Hatfield. The need for public basketball courts, as outlined in the towns Open Space and Recreation Plan, has been accommodated along with the relocation of a baseball diamond with official Little League standard dimensions. A 12-and-under soccer field has also been laid out with the possibility for additional field's for players and league's of a younger age. Additionally a new exterior loop around the facilities has been proposed to improve the sites circulation and provide a clear and defined path system.

An overwhelming defining agent of the Center School site was the 10-foot bank along three sides of the playing fields location. By terracing the landform out from the school building, we have minimized the potential impact of storm water run off to the new basketball courts as well as allowing for the landform to help define the new space and provide a buffer from the baseball field. The introduction of more trees will also help provide safety and definition of the space, as well as buffer between the residences on the northern edge of the site and the new playing grounds.



Proposed Youth Center Grounds Perspective:

This perspective allows for the envisioning of how the landform is dealt with here on this site. Planting out the banks with shading loving groundcovers on the nearest bank and with vibrant wild flowers on the second bring color, texture and life to the space and help slow potential storm water runoff to the parking lot above and new court surface. The new shade trees are also depicted, which will provide shade to this largely open and exposed recreational complex.



Proposed Bike Trail Connection from Hatfield to the Northampton Rail Trail

The layout of the proposed bike trail is in response to the distinctive ridgeline that divides the undevelopable wetlands below to the more readily developable land atop the ridge. By following the sites landform an interesting experience can be realized. The meandering nature of the trail provides the user with a variety of straight ways and long arching turns. Along the trail two spaces of rest and engagement have been provided. Also the reforestation of many or sparsely vegetated areas along the route have been filled in with indigenous tree and shrub species to supply more habitat and reduce the amount foreign influence on the site.

The first space located on the southern side of the site has been provided and selected for the enjoyment of the rider or hiker to come to rest and enjoy a view out to the Connecticut River. The high elevation of the space, along with minimal selective thinning, was the key to the selection of creating a place of prospect.

The second space has been selected for its closer proximity to the town of Hatfield and is designed as a place of destination not only from the bike trail but from town as well. A large open green has been created with seed stemming from the native thin leaved fescues and rye of New England. This is important for recognizing the impacts foreign turf species would have in this environment as well as the impacts of constant fertilization and maintenance. The purpose of the selected seed is for a virtually maintenance free turf surface that will have minimal effects in such an eco-sensitive landscape.

In addition to the two spaces, a series of hiking trails radiating from the bike trail have been provided for even more variety of surface types and route options. Approximately 1.5 miles of additional trails along the bike route have been created.

Plan for the Northampton Rail Trail Connection



Section of the Bike Trail in Relationship to the Rail Line and Prospect Space



The section shows the relationship of the proposed bike trail to the active rail line that cuts through the town of Hatfield. It is important to analyze the space between the trail and the rail line to ensure safety to the rider and hikers that will be using the trail. Additionally conveyed in the section is the distance of the prospect space to the proposed bike trail, giving a sense of scale to the node and defining landform.

Elm Court Green Perspective

The perspective shows the spatial quality and layout of the large open green among the densely forested landscape. Subtle landform helps define the outer edges of the space and delineates the areas for seating along the parks periphery from the proposed hiking loop that travels around the space. At the center in the green, meant for recreational use as well as a place for rest and relaxation. It is a space is programmatically flexible and is to be interpreted by the user.



Hatfield Elementary School:

For the design of the Hatfield Elementary School focus area much emphasis was placed on a pragmatic approach to the town's desire for increased outdoor recreation space. Accordingly, in addition to bringing a pedestrian trail through the area from Main Street to connect to the Old Mill area as a part of the greater greenway network, one of the first steps was to add more playing fields.

In the agricultural field that was recently acquired by the town, there was added a baseball field, a soccer field a three basketball courts. Because of the flexible nature of these playing fields, should the adjacent cemetery ever in the future need room to expand, it could easily absorb part of or the entirety of the soccer field.

Another key part of the development for this focus area was the redesign of the Lion's Club Pavilion area. The first element of this redesign was to realign the parking lot to allow more open space between the parking area and the pavilion structure itself, in addition to adding formal paved parking spaces. Along with the new parking, new opportunities were added for family recreation activities. Three new sand courts were constructed which could be used for volleyball during warmer months and then flooded and frozen for outdoor ice skating in the winter, thus adding multi-seasonal use to the program of activities. There was also added to the area a new 75' x 75' playground area for young children to play in and enjoy.

The easternmost part of the common contains the town library and a majority of the existing vegetation. Likewise, to preserve the rich character of this portion of the common and to not disturb the aging vegetation, not much was developed in this area, less several meandering pedestrian pathways for visitors to the park to leisurely walk through and enjoy the naturalized area.



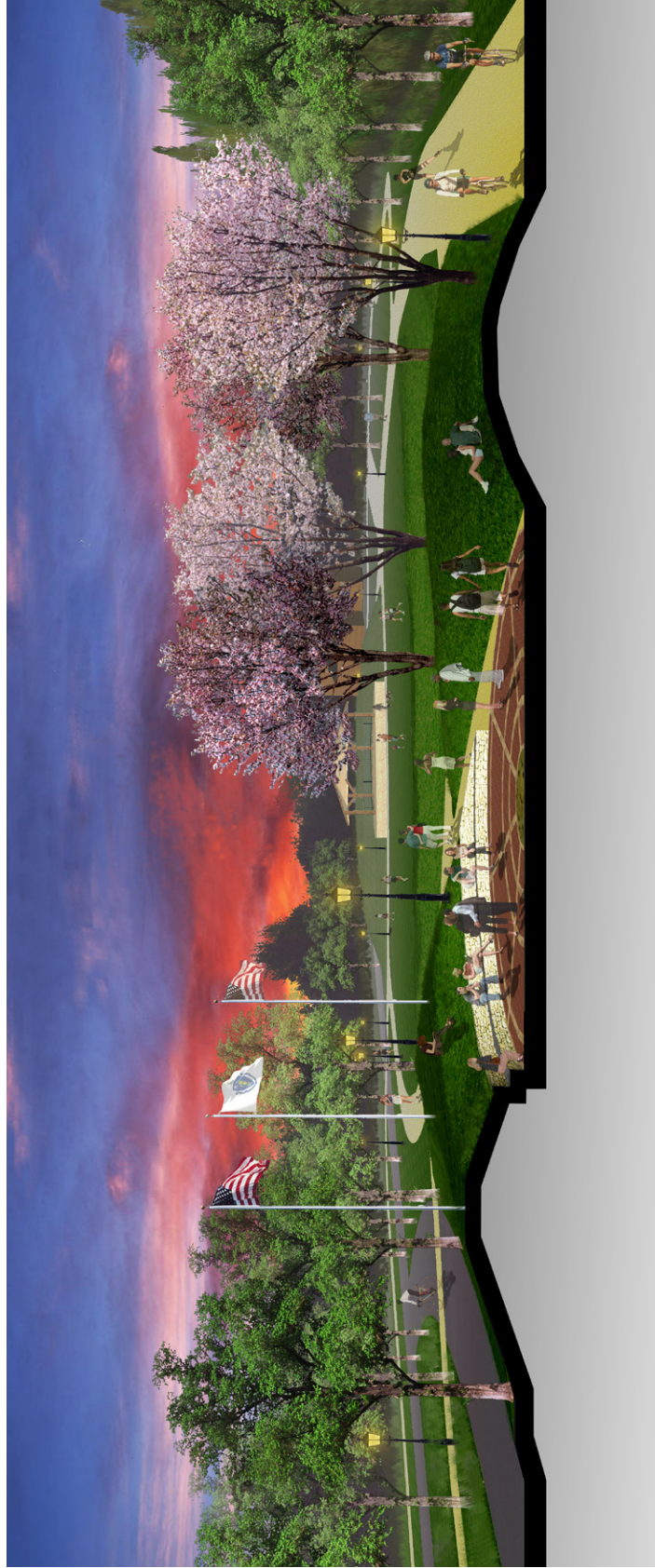


The most important component of the Hatfield Elementary School focus area however is the addition of a new town common in the vacant lot between the school and the town library. With the town absent of a formal town common, constructing such an area was deemed beneficial to adding to the downtown character. The plan for the town common takes into account and embraces existing features such as the existing mature trees and vegetation, and the existing pedestrian path that connects Main Street to the school. Additionally, one aspect that the town desired was an emergency vehicular access to the elementary school. Therefore the existing path was widened to allow emergency vehicle access but blocked off by bollards to keep it pedestrian-only during normal operation.

The central part of the common features another element that was strongly desired by the town: a bandstand or gazebo to allow for outdoor musical performances. This new bandstand, which is tucked backed into a mound of raised landform. The bandstand looks out west over a large open slightly sloping backward grassy field surrounded by trees along its periphery.

Finally, the prominent feature in the western portion of the common is a large circular plaza surrounded by raised landform and an arrangement of five flagpoles. This plaza could be used as an outdoor classroom for teachers and students or simply serve as a more intimate gathering space for residents visiting the park.

Essentially, the three portions of the common could be seen as analogous with the history of the town of Hatfield. The wooded eastern portion is reminiscent of the area's pristine and virgin state before the arrival of European settlers, while the central open space flanked by trees is pays homage to Hatfield's rich history as a town of farming and agriculture. Finally the formal plaza in the western part of the common is a symbol for the civic pride of Hatfield today. By making these improvements to the Hatfield Elementary school area, the town center will become a much more vibrant hub in the greater greenway network.



Section showing the town common with emergency vehicle access

Street Trees:

The image below shows the street trees circa 1890. As you can see the trees are already very old in this picture. Since then the trees have continued to grow, however some have become diseased, and others have died. Unfortunately many of these trees are reaching the end of their lifespan, and measures need to be taken to ensure the character of the downtown streets is not lost, along with the trees.

Detailed analysis and assessment was carried out and regarding the location of the diseased and dead trees and recommendations will be made regarding the best strategy to reinvigorate these trees.



Main Street, 1890

Source: <http://www.heritagesurveys.com/hatfield.jpg>

This image shows an example of a dead tree along Main Street in Hatfield. The tree has essentially been removed, however the 12' stump has been left in place, creating an eyesore, and diminishing the aesthetic value of this section of the downtown area.



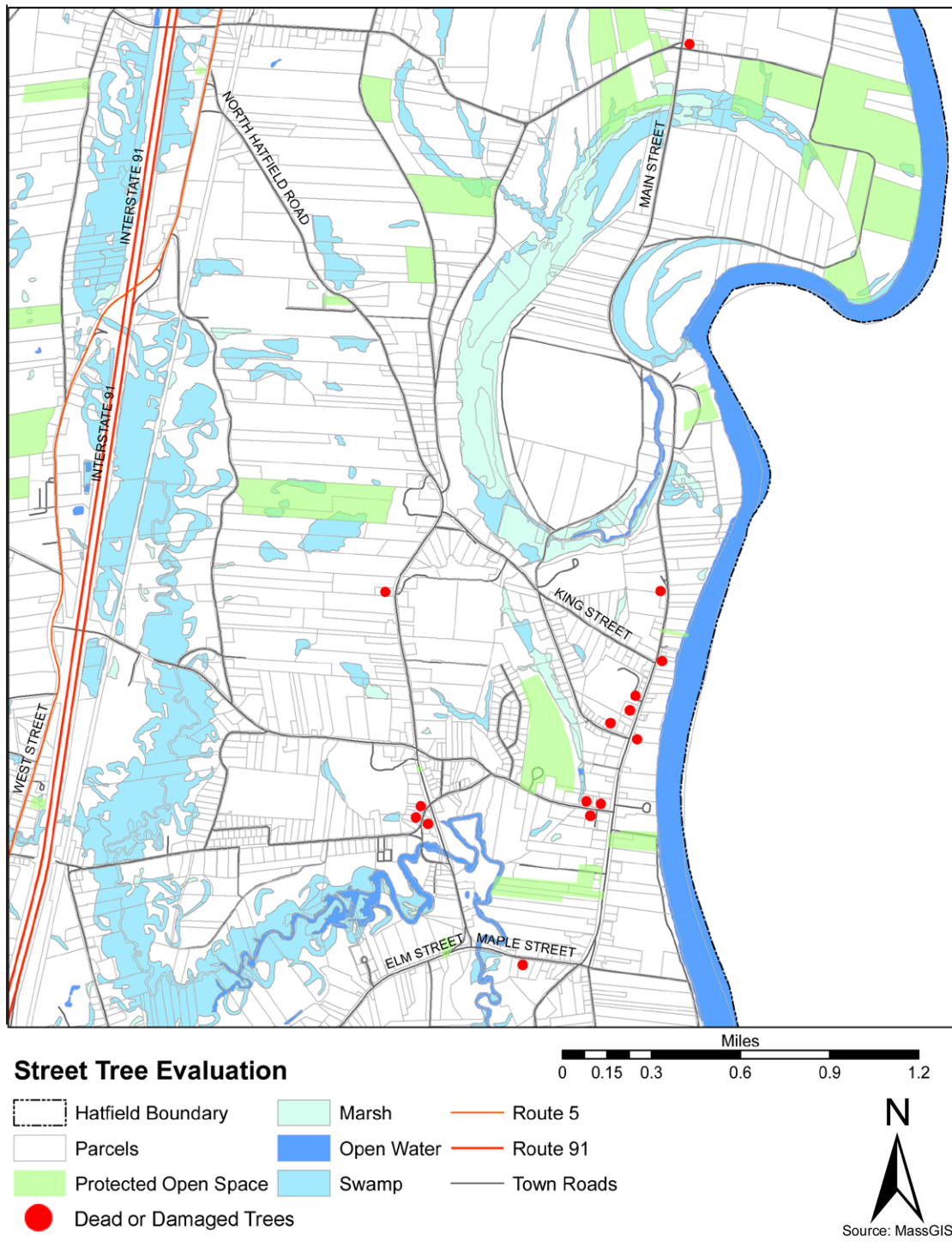
Source: Zak Kingston

This image shows how the removal of this stump and the addition of a new street tree could improve the look and feel of Main Street. A tree this size would take decades to grow this large, but the sooner a new healthy tree is planted, the sooner Main Street will be improved.



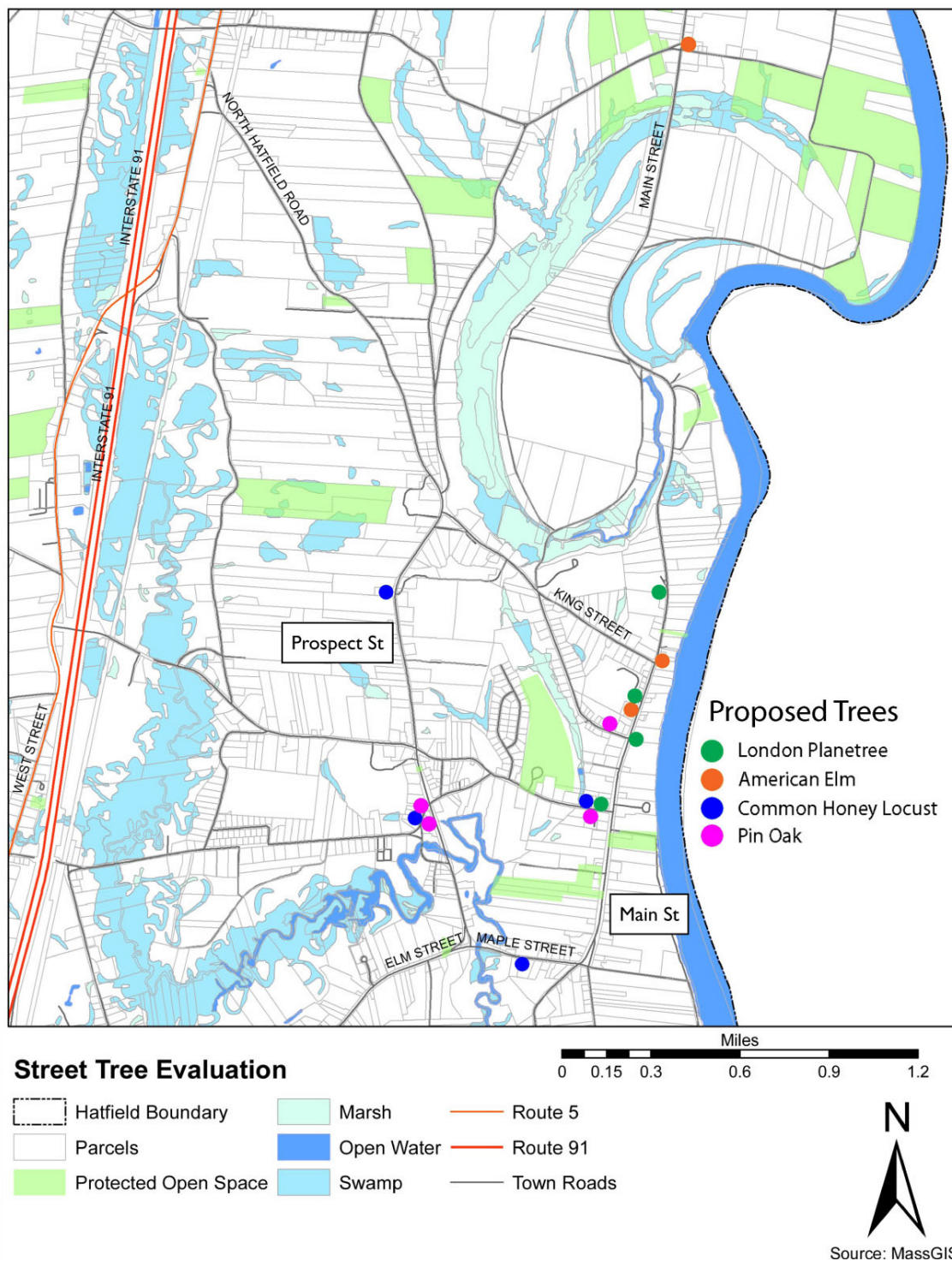
Source: Zak Kingston

Location of Trees to be Replaced:



This map shows where the most severely damaged and diseased trees are in Hatfield. The red dots indicate the location of the trees recommended to be replaced. The focus area of this study included Main St., Maple Street, Prospect St., School St., and North St.

Location of New Varieties of Trees:



The proposed trees to be used to replace these trees are indicated on the above map. London Plane Trees and disease-resistant American Elm are proposed along Main St., and Honey Locusts and Pin Oaks are recommended for the side streets.

The reasons for these choices are fully explained on the following pages.



Common Name: London Plane Tree
 Latin Name: *Platanus x acerfolia*

Benefits:

- maximum height 70' - 80'
- ornamental bark
- easily transplanted
- very adaptable
- pollution tolerant



Common Name: American Elm (DR)
 Latin Name: *Ulmus americana*

Benefits:

- maximum height 60' - 90'
- easily transplanted
- pH tolerant
- soil and salt tolerant
- (DR) disease resistant varieties



Common Name: Common Honey Locust

Latin Name: *Gleditsia triacanthos*

- Benefits:
- maximum height 50' - 60'
 - pinnate compound leaves
 - pollution and salt tolerant



http://www.floridata.com/ref/g/images/gled__tr_skycole1.jpg



<http://texastreeplanting.tamu.edu/treepictures/honeylocust.jpg>

Common Name: Pin Oak

Latin Name: *Quercus palustris*

Benefits:

- maximum height 70'
- pyramidal shape
- unique branching structure
- salt tolerant



http://www.meridian.k12.il.us/middle%20school/student_work/JCox_Native_trees/pin_oak_tree.jpg



http://static-b.baileynurseries.com.s3.amazonaws.com/image-library/orig/0345/0345-1_QuercusellipNorthernPinOak.jpg

Recommendations:

Main Street:

London Planetree and American Elm

- Maintain historic feel of Main Street
- Similar in form to existing trees
- Both easily transplanted
- Salt tolerant
- Break up current monoculture of street trees
- Add interest with bark of Planetree



http://pics.davesgarden.com/pics/2010/09/21/Kim_MI/6b209a.jpg

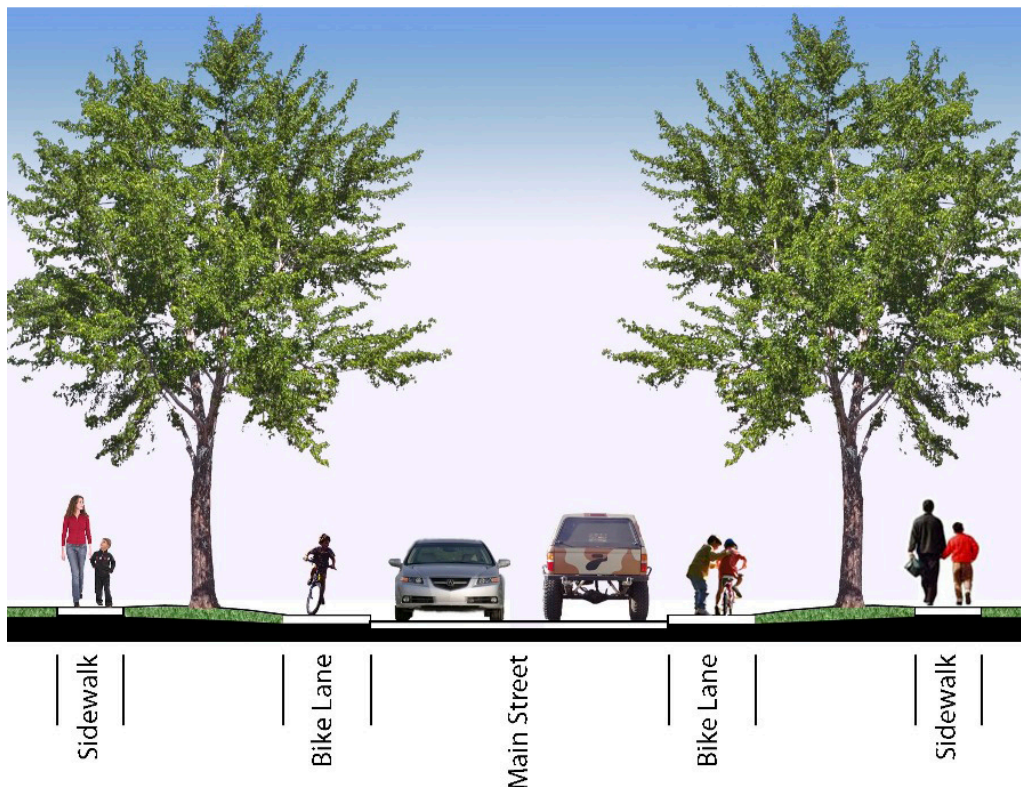
Maple, School, Prospect and North Street

Honey Locust and Pin Oak

- Show different character of these street with different varieties of streets
- Add interest with compound leaves of Honey Locust and branching structure of Pin Oak
- Beautiful fall color
- Low maintenance

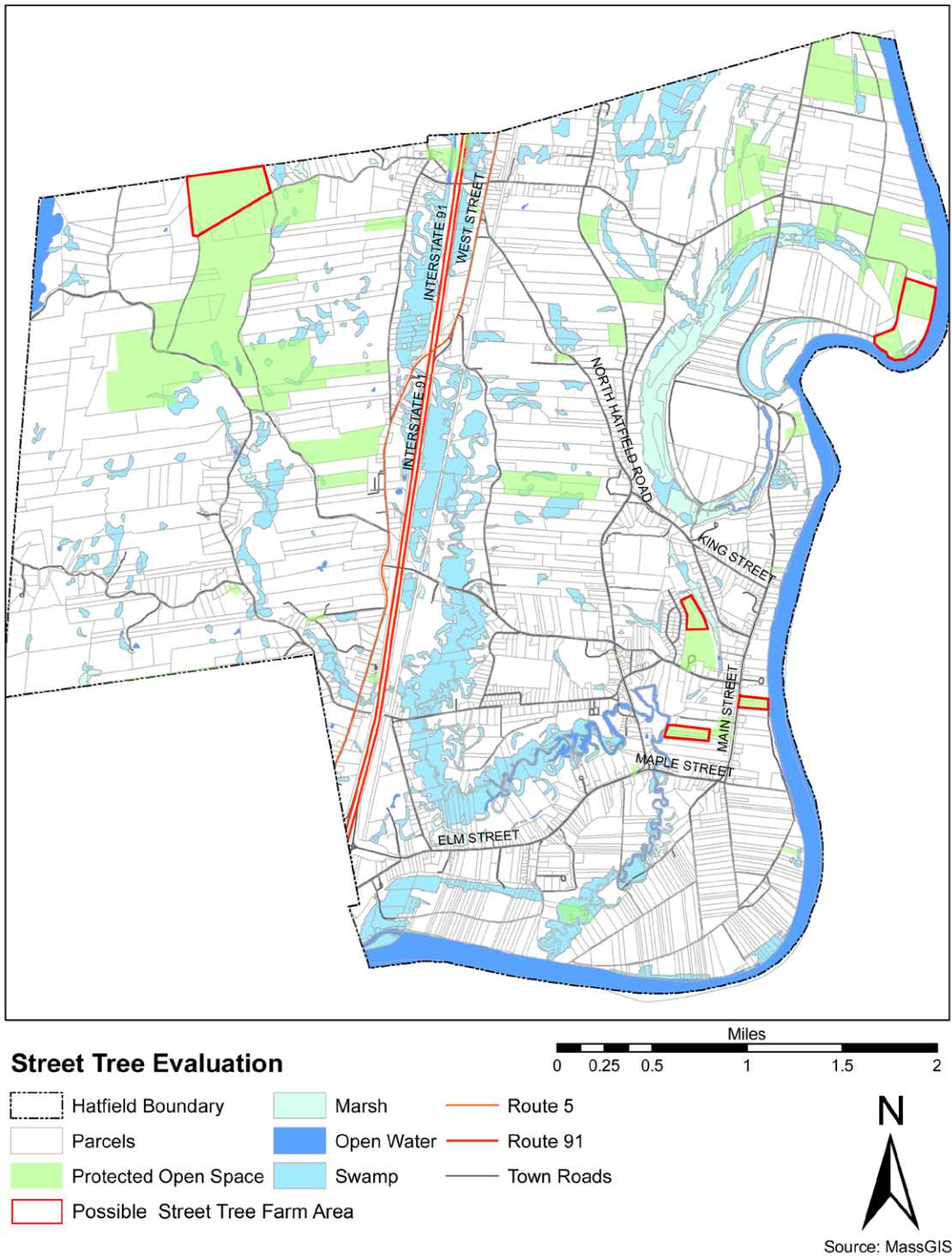


<http://texastreeplanting.tamu.edu/treepictures/honeylocust.jpg>



This sections shows what Main St. could possibly look like with the addition of healthy street trees and bike lanes. The bike lanes simply represent an option that could enhance the feel of Main St. These bike lanes could be simply painted on the street, or raised several inches to further separate the bicycle and vehicle traffic.

Possible Tree Farm Locations:



The implementation of a street tree farm in Hatfield could potentially save the town money, and help the environment by lowering transportation distances of new trees. With a tree farm, Hatfield would have the ability to pull and replace diseased trees as needed, without having to hire outside contractors.

Recommendations:

Main Street:

To maintain the historic look of Main Street it is recommended to replace the diseased and dead street trees with disease resistant varieties of American Elms and London Plane Trees. These varieties of trees have a similar form to the trees presently lining the street. These varieties of trees are easily transplanted, and will work well if Hatfield decides to implement a tree farm.

The American Elm is salt and pH tolerant and will thrive in close proximity to the street. The London Plane Tree is very adaptable to multiple growing situations. The ornamental bark will add interest to the trees when walking along the sidewalk.

The addition of the American Elm and the London Plane Tree will break up the monoculture of trees that currently line Main Street. It is important to have more than one variety of tree in an area to ensure that if a pest or disease comes through an area, not all of the trees will be negatively affected.

Maple Street, School Street, Prospect Street and North Street:

These streets boast a different character than Main Street. They are less formal and are better suited for different varieties of trees. Common Honey Locusts and Pin Oaks would add interest to the area.

Honey Locusts have pinnately compound leaves, much different than the most of the surrounding trees in the area. Leaves of this type shimmer in breezes and are easily cleaned up by maintenance crews. Honey Locusts are commonly used as street trees and thrive when used for the purpose.

Pin Oaks are also viable street trees. These hardy trees are salt tolerant and have a beautiful red fall color. The branching structure of this tree is what makes it unique, and is its most identifiable feature. Lower branches angle down, middle branches straight out, and upper branches angle upward.

It is recommended that an even mix of Honey Locusts and Pin Oaks are used to further the diversity of tree species found lining the streets of Hatfield.

Tree Farm:

The implementation of a tree farm is recommended to ensure the resources for future tree needs are found locally in Hatfield. A tree farm could also function as an outdoor classroom for local students, teaching them about the complexities of conservation, forestry, and horticulture.

Conclusion:

This Greenway proposed in this reports will benefit the town in many ways. The network of trails will provide much needed recreation avenues for the residents of Hatfield. The expansion of the sidewalk system will ensure the safety of people walking along the streets, and also provide loops of sidewalks, so it will not be necessary to turn around and walk the way you came.

The proposed bus stop in front of Smith Academy Memorial Park will connect Hatfield with neighboring towns, as will the connection to the Northampton Rail Trail.

The proposed protect space will link already protected areas and create a swath of protected land that will act as a habitat corridor for the abundant wildlife found in Hatfield.

Improved boat access for both the Mill and Connecticut Rivers will better allow residents to explore their own backyards.

The Greenway network as a whole aims to better connect the town of Hatfield in a more fluid way. Inviting gathering points, proposed along the way, will provide much needed activities for residents. This proposal has taken great care to understand the needs and wants of Hatfield, and address these issues in a sensitive way. The implementation of any of the ideas presented in this proposal will enhance the quality of life in Hatfield, while still maintaining the charm and character of this beautiful town.

Sources and Bibliography:

- Town of Hatfield Town Center Study Summary Report, Pioneer Valley Planning Commission: December, 2010
- Open Space and Recreation Plan: Hatfield, MA, Prepared by Hatfield Open Space Committee with assistance from Pioneer Valley Planning Commission: April, 24, 2008
- Town of Hatfield Town Center Study Summary Report, Pioneer Valley Planning Commission: December, 2010

Images:

- All maps produced in ArcMap Mass GIS
- All photos individually cited

